EDUCATING GIFTED AND TALENTED PUPILS IN ALBERTA

Summary Report of the Minister's Task Force on Gifted and Talented Pupils

Alberta Education

1983

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INTRODUCTION

In January 1982, Minister of Education David King established a Task Force on Gifted and Talented Pupils and commissioned it with the task of studying the education of gifted and talented children in Alberta. The Task Force was asked to define gifted and talented pupils, examine and evaluate related programs and services in Alberta and elsewhere, determine the most appropriate ways of serving and providing for gifted and talented pupils in Alberta, and recommend to the Minister appropriate actions in this regard.

Between July 1982 and March 1983 the Task Force held 13 meetings. The members of the Task Force, who represented groups having a major interest in the education of the gifted and talented, were:

Alberta Education	- Dr. Heleen J. McLeod, Chairman
Alberta School Trustees' Association	- Dr. Rhonda Collins, Pincher Creek
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University Senate	- Mr. Pierre Gariepy, Edmonton (Resigned December 1982 due to ill health)

The Task Force obtained information from three main sources: written and oral submissions, the research literature (particularly a 1983 study by Sillito and Wilde[1]), and the combined knowledge and experience of Task Force members. Individuals, agencies and organizations sent 177 written submissions to the Task Force. A number of those who sent written submissions also made oral presentations.

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1. M. Sillito and W. Wilde, Educating the Gifted (Alberta Education, 1983)

On the basis of information obtained from these sources, the Task Force arrived at several general conclusions about appropriate educational programs and/or provisions for gifted and talented children. These conclusions, combined with specific recommendations for action at both provincial and local levels, are presented below.

CONCLUSIONS AND RECOMMENDATIONS

The Task Force on Gifted and Talented Pupils has determined that there is an urgent and critical need to recognize the gifted and talented children of Alberta and to provide more adequately for their special educational needs. In order to reach their full potentialities, these children must have suitable challenges and profitable educational experiences. The Task Force has found that some schools and school jurisdictions in Alberta are doing a satisfactory job of serving their gifted and talented pupils, within existing resources; however, many schools' provisions for these children are unsatisfactory. The educational needs of gifted and talented children are largely neglected.

The Task Force has concluded that the basic educational goal for gifted and talented pupils is the same as for all other pupils: to develop the pupils' abilities and potentialities in ways consistent with their needs for personal fulfillment and in the best interests of society. Since the gifted and talented have special needs, it seems apparent that schools must develop mechanisms whereby gifted and talented pupils are identified early in their education and subsequently provided with educational programs geared to move them toward productive achievement and self-fulfillment.

The literature suggests that there is no single approach for the appropriate education of these pupils. Programs which now exist in the province may not be suitable for all situations. School jurisdictions require freedom to develop and provide program alternatives for the specific population of pupils they serve.

The Task Force has arrived at several conclusions about providing appropriate educational experiences for and meeting the needs of gifted

and talented pupils. Out of these conclusions arise various recommendations for action by those responsible for their education, both at the provincial and local levels. This summary of the Task Force report presents each conclusion and its related recommendation(s), followed by a brief commentary which provides a rationale for the recommendation(s) and/or explains by adding relevant details.

Conclusions and recommendations are organized according to broad topic areas: definition, identification, programs, inservice education and training of teachers, other program considerations, research and evaluation, and provincial initiatives. However, this order of presentation is not intended to signify order of priority. Although some recommendations may have broader implications than others, the Task Force considers all of its recommendations to be important. The Task Force also wishes to stress the need for action on all of the recommendations at an early date.

DEFINITION

Conclusion

1. A definition of the gifted and talented pupil is needed, and the definition arrived at needs to be multi-faceted.

Recommendations

It is recommended that:

1.1 Alberta Education accept and use the following definition of gifted and talented pupils:

> Gifted and talented pupils are those who by virtue of outstanding abilities are capable of exceptional performance. These are children who require differentiated provisions and/or programs beyond the regular school program to realize their contribution to self and society.

Children capable of exceptional performance include those with demonstrated achievement and/or potential ability in one or several of the following areas:

a. general intellectual ability,
b. specific academic aptitude,
c. creative or productive thinking, and
d. visual and performing arts.

1.2 Three to five percent of the general school population be used as a guideline as to what proportion of pupils are considered gifted and/or talented, that is, requiring differentiated provisions and/or programs beyond the regular school program.

Commentary

A definition of gifted and talented pupils is important because educators and other persons involved with programs for these pupils need a common concept of who might be served. Also, those involved must know that not all types of exceptionality are served by specific programs. It is hoped that the definition can reduce misunderstanding and confusion in this regard, because parents, teachers and pupils frequently hold varying opinions about the nature of giftedness.

Another purpose of the definition is to communicate the heterogeneous nature of the gifted and talented population. For example, those gifted or talented in the visual or performing arts may or may not also have academic gifts or talents.

Further, a definition provides a basis for all activities associated with programs for gifted and talented pupils: screening, identification, and placement of pupils; development and delivery of curriculum; evaluation; and support activities.

Three to five percent as a guideline for the proportion of gifted and talented pupils arises from a number of sources, including the United States Office of Education (Marland, 1971). Many programs use this guideline. The figures may be set for somewhat pragmatic reasons, including: a) human and financial resources are often limited and b) it is the pupils at the extremes of any distribution who need programs which are most different and divergent from the norm.

Although this percentage may seem small, it should be noted that in Alberta between 12,000 and 22,000 pupils are involved.

IDENTIFICATION

Conclusion

2. Screening and identification processes are needed to select the pupils who will participate in special programs. Gifted and talented children need to be identified as early as possible, and the identification process needs to continue throughout a child's school years. Ideally, identification involves many criteria of different kinds and input from many sources, including teachers and parents.

Recommendations

It is recommended that:

2.1 Alberta Education a) identify (or develop where necessary) appropriate screening and assessment tools for the identification of gifted and talented pupils and b) where feasible, make these available to school jurisdictions through the School Book Branch.

2.2 School jurisdictions be responsible for early and ongoing identification, with: a) screening not later than grades 1 - 2 and again at grades 5 - 6, and b) periodic reviews throughout the pupil's school years.

2.3 Identification involve several different procedures, including initial screening, further assessment and final selection, and be based on several sources of information.

Commentary

Specifically, the identification process should include:

(a) Initial nomination. Input can come from many interest groups and sources such as parents, teachers, counsellors and peers.

(b) Screening. Teacher observation in the classroom; rating scales; pupil's report of his/her interests, hobbies and career expectations; and group tests of achievement, ability and creativity are possible screening devices.

(c) Comprehensive assessment and evaluation. Information gathered will depend in part on the nature of the program to be initiated. In addition to information already gathered in initial nomination and screening, information such as the following should be collected: developmental information from parents, academic history from school records, interview information from various sources, personality assessment, individual intelligence test results, assessment of creative thinking skills, observation of pupils in various environments, and the pupil's products, accomplishments and awards.

(d) Selection and placement. Local school jurisdictions should be encouraged to establish a committee to aid in the selection of pupils who will receive special provisions and/or programs for the gifted and talented.

Since the population of gifted and talented pupils is heterogeneous, the identification process is necessarily complex. Using intellectual assessment (I.Q. testing) alone, as a single criterion, is not sufficient for use in selection for some gifts or talents. Intelligence testing may discriminate, for example, against children who have potential in the visual or performing arts but whose verbal ability is only average, or against children who are culturally different.

To be fair and just, the data sources used for selection should be as reliable and valid as is feasible. Accordingly, additional development and validation of procedures merit consideration.

PROGRAM

In this section the term "program" is used to refer to all aspects of curriculum development, instructional methods, support services and organizational structures or delivery systems.

Conclusion

3. Education of the gifted and talented requires special programs from grades 1 through 12. Gifted and talented children need a "qualitatively differentiated" curriculum which will challenge them, stimulate their thinking, and broaden their abilities and interests. They also need a curriculum suited to their chronological and mental ages. Leadership and coordination of school programs at the local level is also essential.

Recommendations

It is recommended that:

3.1 All school jurisdictions be responsible for providing special programming (curriculum, instruction and support services) commensurate with the specific needs of gifted and talented pupils.

3.2 Alberta Education identify (and develop where necessary) a variety of models of educational programs or provisions and develop guidelines for support services, including parental involvement, to be used by schools in determining appropriate provisions for the needs of gifted and talented pupils.

3.3 All school jurisdictions designate a staff member to be responsible for coordination and communication with regard to the education of gifted and talented pupils.

Commentary

Choice of curriculum is crucial to the success of programs for gifted and talented pupils. Some local jurisdictions therefore need guidance and direction from appropriate sources, including Alberta Education. (Note: Inservice for all persons involved - see Recommendation 7.1 on page 11 - can also contribute to the program's success.)

Gifted and talented pupils need curricula which emphasize the upper levels of the taxonomies in the cognitive and affective domains. Conventional schooling emphasizes linear or convergent thinking and getting the "right" answers whereas gifted and talented pupils need opportunities for lateral or divergent thinking and creative problem solving.

Since the pupils served are especially heterogeneous, programming must be flexible so that adaptation to individual differences is feasible. A variety of models of instruction are appropriate.

The Task Force noted that in many cases gifted and talented pupils are expected to do a "double curriculum"; that is, they must complete regular class assignments and do additional special work as well. The Task Force believes that this approach to programming is not acceptable and that alternative strategies should be considered.

Conclusion

4. There are aspects of the provincial curricula which could be used in or adapted for the education of gifted and talented pupils.

Recommendations

It is recommended that:

4.1 Alberta Education survey curricula to identify aspects which are potentially useful in or adaptable for the education of gifted and talented pupils.

4.2 Alberta Education consider the needs of gifted and talented pupils in the development and revision of all curricula.

Commentary

Alberta Education may well find some suitable curricula for gifted and talented pupils in its present curriculum documents. Accordingly, to avoid duplication of effort, a thorough review would be in order before new curricula is developed. Adaptation of present curricula might also be useful in some cases.

The Task Force believes that flexibility is important in all aspects of curriculum development and implementation for gifted and talented pupils. Although present curricula may be suitable in some cases, school jurisdictions need freedom to adapt curriculum to suit local conditions.

Conclusion

5. Since a variety of organizational structures are possible, schools face the challenge of determining the most appropriate means for serving their clientele. Local school jurisdictions are responsible for developing administrative policies and procedures that are consistent with provincial legislation and guidelines.

Recommendations

It is recommended that:

5.1 Alberta Education develop guidelines for a variety of delivery systems for the education of gifted and talented pupils.

5.2 Local school jurisdictions a) recognize that a variety of delivery systems can be used in the education of gifted and talented pupils, and b) be responsible for developing related policies and procedures.

Commentary

Many delivery systems (including acceleration, special grouping, enrichment, special schools and other arrangements) are viable, depending on local needs, resources and geographic/demographic conditions. In many instances one or more or a combination of several delivery systems can be used effectively. Some pupils' needs are best met through enrichment in regular classes, whereas in other cases special schools for gifted and talented pupils are appropriate.

Since delivery systems must be adapted and modified to suit local conditions, flexibility is of primary concern. Another concern, in the case of enrichment or special grouping, is time allotted to programs. Several pupils enrolled in special classes for the gifted and talented provided written submissions to the Task Force indicating that they enjoyed the special classes very much but that activities took place for only one or two hours per week, which was not enough time.

Conclusion

6. The social, emotional and vocational needs of gifted and talented pupils warrant attention.

Recommendations

It is recommended that:

6.1 Local school jurisdictions provide counselling and psychological support services to address the special needs of gifted and talented pupils.

6.2 Present university training programs for psychologists and counsellors be augmented to include study of the needs of gifted and talented children.

Commentary

Gifted and talented children may not be as socially and emotionally mature as they are intellectually advanced. These children sometimes suffer because they are different, and can be extra sensitive and highly susceptible to adult and peer opinion. Unfortunately, teachers, pupils, family members and the general public may have difficulty understanding and accepting the gifted. The usual response has been to counsel the gifted child to cope with his or her situation. This Task Force suggests that those who come into contact with the gifted child might also be encouraged to be more tolerant and to value the contributions the gifted child can make.

INSERVICE EDUCATION AND TRAINING OF TEACHERS

Conclusion

7. Teachers, administrators, counsellors and all persons involved in educating gifted and talented pupils need to develop a greater awareness of these pupils' special needs and translate this knowledge into effective teaching practices. Provision of effective inservice education requires awareness of these needs at both local and provincial levels.

Recommendations

It is recommended that:

7.1 Alberta Education assume a leadership role in communicating to appropriate agencies the importance of inservice education for teachers and others involved with the education of gifted and talented pupils.

7.2 Responsibility for the inservice education of teachers be shared by appropriate agencies, including school jurisdictions, universities, Alberta Education, the Alberta Teachers' Association, the Alberta School Trustees' Association and the Conference of Alberta School Superintendents.

Commentary

Teachers and other educators frequently lack knowledge and skills in the area of the education of the gifted and talented. Inservice education can facilitate the development, implementation and evaluation of all new programs.

Conclusion

8. Parents require orientation and assistance in recognizing, understanding and fulfilling the needs of their gifted and talented children.

Recommendation

It is recommended that:

8. Alberta Education identify and/or prepare resource materials which school jurisdictions and other agencies can use in providing consultation and education for parents.

Commentary

Submissions to the Task Force indicated that individual parents, parent support groups and family support agencies would find such resource materials useful.

Conclusion

9. Alberta post-secondary institutions lack comprehensive teacher training programs which focus specifically on the education of gifted and talented pupils.

Recommendations

It is recommended that:

9.1 Alberta university faculties of education prescribe that all prospective teachers take one full survey course equivalent on understanding the needs of various types of exceptional pupils, including the gifted and talented.

9.2 Alberta universities provide specialized training at the graduate Diploma or Masters level for teachers of gifted and talented pupils.

9.3 Alberta Advanced Education provide the additional funds necessary to implement the foregoing courses and programs (see Recommendations 9.1 and 9.2).

Commentary

Sometimes gifted and talented children are overlooked because classroom teachers are not sufficiently skilled in recognizing their characteristics. The Task Force therefore concludes that all teachers need some training in recognizing and working with gifted and talented pupils.

Additionally, teachers who are assigned to special programs for gifted and talented pupils must have comprehensive knowledge and understanding of the pupils' needs, along with the relevant skills. Presently, comprehensive and systematic university training in this field is not available in Western Canada.

OTHER PROGRAM CONSIDERATIONS

Conclusion

10. The school, family and community have a joint responsibility to help gifted and talented children a) pursue individual interests, b) grow socially and emotionally and c) develop creative abilities, divergent thinking skills, and visual and performing arts skills. There is a need to consider what roles community agencies, professional and interest groups, local school jurisdictions, post-secondary institutions and provincial government departments play in their shared responsibility for the education of gifted and talented pupils. An area in which responsibility particularly needs to be shared is education in the visual and performing arts, since schools frequently lack the necessary resources to provide in-depth experiences in the arts. Agencies outside the school could assist greatly with this type of instruction.

Recommendations

It is recommended that:

10.1 Alberta Education prepare guidelines to be used by school jurisdictions in coordinating the involvement of non-school persons and agencies in the education of gifted and talented pupils.

10.2 School jurisdictions be flexible in allowing pupils access to appropriate learning experiences outside the school without penalty.

Commentary

The academic emphasis which is typical in most schools can be detrimental for pupils who are gifted and talented in the visual or performing arts and in other non-academic areas. Recognizing that schools are not

always able to provide in-depth programs in the arts, the Task Force suggests that schools could do more to help artistically gifted pupils gain access to artistic experience outside the school. Experiences outside the school are also relevant for pupils who have skills and talents in other areas.

RESEARCH AND EVALUATION

Conclusion

11. Continuing research is needed to determine and evaluate the best programs and identification procedures for gifted and talented children.

Recommendation

It is recommended that:

11. Alberta Education encourage and support research and evaluation in all areas related to the education of gifted and talented pupils.

Commentary

Much remains to be learned about the best ways of educating gifted and talented pupils. Research into all aspects of this field would be extremely useful. For example, since the application of computer technology could have particular relevance to the education of the gifted and talented, research in this area would probably be fruitful.

PROVINCIAL INITIATIVES

Conclusion

12. Provincial legislation is required to clearly establish that all Alberta school jurisdictions have a legal responsibility to provide appropriate educational programs and/or provisions for gifted and talented pupils.

Recommendations

It is recommended that:

12.1 Alberta Education enact legislation which prescribes that local school jurisdictions offer appropriate educational programs and/or provisions for gifted and talented pupils.

12.2 Alberta Education include mandatory legislation regarding the education of gifted and talented pupils on the agenda for its upcoming revision of The School Act.

Commentary

The laws of Canada (and of Alberta) uphold and protect individuals' rights, but fair and just treatment of all children might be better ensured through more specific legislation. In its report entitled Child at Risk, the Standing Senate Committee on Health, Welfare and Science recommended that "... those Provincial Governments that have not already done so introduce legislation making school boards legally responsible for providing all handicapped, learning disabled and highly intelligent children in the public school system with access to special education" (Government of Canada, 1980, p.58).

Aside from the human rights aspect, the recommended legislation would be congruent with the general educational goal of maximizing the develop-

ment of all children. The gifted and talented are potentially able to contribute a great deal to society, but if they receive no encouragement or support, many of their contributions could be lost.

Conclusion

13. School jurisdictions lack the financial resources necessary to support appropriate education of gifted and talented pupils on a secure and continuing basis.

Recommendations

It is recommend that:

13.1 Alberta Education provide grants to local school jurisdictions, specifically for the purpose of initiating and maintaining programs and support services for the education of gifted and talented pupils.

13.2 Specific provincial grants for programs and support services for the education of gifted and talented pupils be designed to provide approximately 85% of allowable costs.

13.3 The provincial government and the private sector offer specific incentives, grants, awards and scholarships to pupils to encourage the pursuit of excellence.

Commentary

Since programs and support services for gifted and talented pupils are a new venture for many school systems, financial incentives are required to facilitate initiation. Current school finance arrangements have no ear-marked grants for the provision of programs and services for gifted and talented pupils; yet such grants exist for the education of other groups of children with special needs, such as the handicapped.

The Task Force suggests a provincial share of 85% of allowable costs on the basis that some other provincial grants aim at providing approximately that much of the cost (for example, transportation grants).

Conclusion

14. Alberta Education needs to establish clearly visible leadership in the area of education for gifted and talented pupils. At present, no particular individual or section of Alberta Education has responsibility in this area.

Recommendations

It is recommended that:

14.1 Alberta Education establish the positions of a) a provincial coordinator and b) a consultant in each Regional Office of Education to provide leadership, consultation and program evaluation with regard to the education of gifted and talented pupils.

14.2 Alberta Education provide inservice education on the needs of gifted and talented pupils to all consultants in the Regional Offices of Education, in order to enhance the abilities of these consultants to provide services in this area.

14.3 Alberta Education establish a central clearinghouse service[2] to provide an information service to all Alberta school jurisdictions regarding curricular resources and exemplary programs for the education of gifted and talented pupils.

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2. The "central clearinghouse" refers to a central agency which provides coordinating and facilitating services. Often the service involves simply a list of all available resources which is kept up to date and distributed to regional resource centres and school jurisdictions on a regular basis.

14.4 Alberta Education establish regional resource centres[3] which are integrated with a provincial clearinghouse service (see Recommendation 14.3).

Commentary

Since special programs for the gifted and talented are relatively new, many school jurisdictions will need help with implementation and evaluation. Also, since programs for gifted and talented children often involve individualized curriculum and adaptation to local conditions, the availability of a wide range of materials and resources is important. When materials and resources are accessible locally or regionally, teachers, parents and agencies are more likely to make use of them.

Members of the Task Force on Gifted and Talented Pupils sincerely hope that the interests of gifted and talented children in Alberta will be better served as a result of their efforts in preparing this report.

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3. "Regional resource centres" store at least one copy of each available item so that potential users can examine it and determine whether or not it is suitable for their needs. More copies of items judged to be appropriate can then be ordered.

REFERENCES

Government of Canada. Standing Senate Committee on Health, Welfare and Science. Child at risk. Ottawa, 1980.

Marland, S., Jr. Education of the gifted and talented. Vol. 1. (Report to the Congress of the United States by the U.S. Commissioner of Education.) Washington, D.C.: U.S. Government Printing Office, August 1971.

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March 31, 1983

Honourable David King
Minister of Education
Legislative Building
Edmonton, Alberta

Dear Mr. King:

On behalf of the Task Force on Gifted and Talented Pupils, I am pleased to present our report, entitled Educating Gifted and Talented Pupils in Alberta.

The Task Force has found that there is an urgent and critical need to recognize gifted and talented children in Alberta and to provide more adequately for their special educational needs. In order to reach their full potentialities, these children must have suitable challenges and profitable educational experiences. The Task Force has found that some schools and school jurisdictions in Alberta are doing a satisfactory job of serving their gifted and talented pupils, within existing resources; however, many schools' provisions for these children are unsatisfactory. The educational needs of gifted and talented children are largely neglected.

The Task Force has also concluded that the basic educational goal for gifted and talented pupils is the same as for all other pupils: to develop the pupils' abilities and potentialities in ways consistent with their needs for personal fulfillment and in the best interests of society. Since the gifted and talented have special needs, it seems apparent that schools must develop mechanisms whereby gifted and talented pupils are identified early in their education and subsequently provided with educational programs geared to move them toward productive achievement and self-fulfillment.

Our recommendations address the following issues: definition and identification of gifted and talented pupils, appropriateness of programs for these pupils, inservice education and training of teachers, research and evaluation, and provincial initiatives such as funding and legislation. The Task Force believes that action on behalf of Alberta's gifted and talented children is long overdue, and that the recommended changes should therefore be considered as quickly as possible.

We believe you will find this report useful.

On behalf of the Task Force, I wish to thank you for having given us the opportunity to address these important issues.

Yours sincerely,

Heleen McLeod

Heleen J. McLeod, Chairman
Task Force on Gifted and
Talented Pupils

SUMMARY

In January 1982, Minister of Education David King established a Task Force on Gifted and Talented Pupils and commissioned it with the task of studying the education of gifted and talented children in Alberta. The Task Force was asked to define gifted and talented pupils, examine and evaluate related programs and services in Alberta and elsewhere, determine the most appropriate ways of serving and providing for gifted and talented pupils in Alberta, and recommend to the Minister appropriate actions in this regard.

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Conclusions and Recommendations

The Task Force on Gifted and Talented Pupils has determined that there is an urgent and critical need to recognize the gifted and talented children of Alberta and to provide more adequately for their special educational needs. In order to reach their full potentialities, these children must have suitable challenges and profitable educational experiences. The Task Force has found that some schools and school jurisdictions in Alberta are doing a satisfactory job of serving their gifted and talented pupils, within existing resources; however, many schools' provisions for these children are unsatisfactory. The educational needs of gifted and talented children are largely neglected.

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The literature suggests that there is no single approach for the appropriate education of these pupils. Programs which now exist in the province may not be suitable for all situations. School jurisdictions require freedom to develop and provide program alternatives for the specific population of pupils they serve.

The recommendations of the Task Force are organized according to broad topic areas: definition, identification, programs, inservice education and training of teachers, other program considerations, research and evalua-

tion, and provincial initiatives. However, this order of presentation is not intended to signify order of priority. Although some recommendations may have broader implications than others, the Task Force considers all of its recommendations to be important. The Task Force also wishes to stress the need for action on all of the recommendations at an early date.

Definition

It is recommended that:

1.1 Alberta Education accept and use the following definition of gifted and talented pupils:

> Gifted and talented pupils are those who by virtue of outstanding abilities are capable of exceptional performance. These are children who require differentiated provisions and/or programs beyond the regular school program to realize their contribution to self and society.
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> Children capable of exceptional performance include those with demonstrated achievement and/or potential ability in one or several of the following areas:
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> a. general intellectual ability,
> b. specific academic aptitude,
> c. creative or productive thinking, and
> d. visual and performing arts.

1.2 Three to five percent of the general school population be used as a guideline as to what proportion of pupils are considered gifted and/or talented, that is, requiring differentiated provisions and/or programs beyond the regular school program.

Identification

It is recommended that:

2.1 Alberta Education a) identify (or develop where necessary) appropriate screening and assessment tools for the identification of gifted and talented pupils and b) where feasible, make these available to school jurisdictions through the School Book Branch.

2.2 School jurisdictions be responsible for early and ongoing identification, with: a) screening not later than grades 1 - 2 and again at grades 5 - 6, and b) periodic reviews throughout the pupil's school years.

2.3 Identification involve several different procedures, including initial screening, further assessment and final selection, and be based on several sources of information.

Program

It is recommended that:

3.1 All school jurisdictions be responsible for providing special programming (curriculum, instruction and support services) commensurate with the specific needs of gifted and talented pupils.

3.2 Alberta Education identify (and develop where necessary) a variety of models of educational programs or provisions and develop guidelines for support services, including parental involvement, to be used by schools in determining appropriate provisions for the needs of gifted and talented pupils.

3.3 All school jurisdictions designate a staff member to be responsible for coordination and communication with regard to the education of gifted and talented pupils.

4.1 Alberta Education survey curricula to identify aspects which are potentially useful in or adaptable for the education of gifted and talented pupils.

4.2 Alberta Education consider the needs of gifted and talented pupils in the development and revision of all curricula.

5.1 Alberta Education develop guidelines for a variety of delivery systems for the education of gifted and talented pupils.

5.2 Local school jurisdictions a) recognize that a variety of delivery systems can be used in the education of gifted and talented pupils, and b) be responsible for developing related policies and procedures.

6.1 Local school jurisdictions provide counselling and psychological support services to address the special needs of gifted and talented pupils.

6.2 Present university training programs for psychologists and counsellors be augmented to include study of the needs of gifted and talented children.

Inservice Education and Training of Teachers

It is recommended that:

7.1 Alberta Education assume a leadership role in communicating to appropriate agencies the importance of inservice education for teachers and others involved with the education of gifted and talented pupils.

7.2 Responsibility for the inservice education of teachers be shared by appropriate agencies, including school jurisdictions, universities, Alberta Education, the Alberta Teachers' Association, the Alberta School Trustees' Association and the Conference of Alberta School Superintendents.

8. Alberta Education identify and/or prepare resource materials which school jurisdictions and other agencies can use in providing consultation and education for parents.

9.1 Alberta university faculties of education prescribe that all prospective teachers take one full survey course equivalent on understanding the needs of various types of exceptional pupils, including the gifted and talented.

9.2 Alberta universities provide specialized training at the graduate Diploma or Masters level for teachers of gifted and talented pupils.

9.3 Alberta Advanced Education provide the additional funds necessary to implement the foregoing courses and programs (see Recommendations 9.1 and 9.2).

Other Program Considerations

It is recommended that:

10.1 Alberta Education prepare guidelines to be used by school jurisdictions in coordinating the involvement of non-school persons and agencies in the education of gifted and talented pupils.

10.2 School jurisdictions be flexible in allowing pupils access to appropriate learning experiences outside the school without penalty.

Research and Evaluation

It is recommended that:

11. Alberta Education encourage and support research and evaluation in all areas related to the education of gifted and talented pupils.

Provincial Initiatives

It is recommended that:

12.1 Alberta Education enact legislation which prescribes that local school jurisdictions offer appropriate educational programs and/or provisions for gifted and talented pupils.

12.2 Alberta Education include mandatory legislation regarding the education of gifted and talented pupils on the agenda for its upcoming revision of The School Act.

13.1 Alberta Education provide grants to local school jurisdictions, specifically for the purpose of initiating and maintaining programs and support services for the education of gifted and talented pupils.

13.2 Specific provincial grants for programs and support services for the education of gifted and talented pupils be designed to provide approximately 85% of allowable costs.

13.3 The provincial government and the private sector offer specific incentives, grants, awards and scholarships to pupils to encourage the pursuit of excellence.

14.1 Alberta Education establish the positions of a) a provincial coordinator and b) a consultant in each Regional Office of Education to provide leadership, consultation and program evaluation with regard to the education of gifted and talented pupils.

14.2 Alberta Education provide inservice education on the needs of gifted and talented pupils to all consultants in the Regional Offices of

Education, in order to enhance the abilities of these consultants to provide services in this area.

14.3 Alberta Education establish a central clearinghouse service to provide an information service to all Alberta school jurisdictions regarding curricular resources and exemplary programs for the education of gifted and talented pupils.

14.4 Alberta Education establish regional resource centres which are integrated with a provincial clearinghouse service (see Recommendation 14.3).

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I INTRODUCTION

Background

Many people in Canada today are showing increasing interest in and are expressing a need for educational programs to meet the special needs of gifted and talented pupils. In 1978 the Canadian Education Association commissioned a survey (Borthwick et al., 1980) to investigate how local school boards in Canada are providing for these children. This survey revealed that the classroom teacher carried a great deal of responsibility for adapting programs. Classroom teachers were using a wide spectrum of curricular resources to enhance learning, and programs varied widely across the nation. The survey also found that no provincial department or ministry of education in Canada provided funding to school boards specifically for the education of the gifted and talented, although some provided short-term funding to encourage the development of such programs.

A 1982 Alberta Education survey[1] of provincial departments and ministries of education provided an update on educational services for the gifted and talented in Canada. This survey revealed that Ontario had passed legislation requiring school systems to provide suitable educational programs for all exceptional children, including the gifted and talented, by September, 1985.[2] The British Columbia Ministry of Education had developed and published provincial policies and guidelines for the education of the gifted and talented. Saskatchewan and Manitoba were providing special project funding. The provinces of New Brunswick, Nova Scotia, Prince Edward Island and Newfoundland reported no involvement at the provincial level, and no information was obtained from Quebec and the Northwest Territories.

Recently, educators and the general public in Alberta have also shown considerable interest in identifying gifted and talented pupils and provid-

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1. The Special Educational Services Branch of Alberta Education conducted a telephone survey.

2. Bill 82, An Act to Amend the Education Act, Ontario Ministry of Education.

ing suitable programs and services for them. The 1977 and 1980 Curriculum Decision-Making in Alberta conferences (jointly sponsored by the Alberta Teachers' Association, the Alberta School Trustees' Association and Alberta Education) passed the following resolutions regarding education of the gifted and talented:

1. It is recommended that Alberta Education take into consideration that the curriculum should reflect the needs of the gifted child. (October 1977)

2. WHEREAS equality of educational opportunity for all students is an accepted principle in Alberta, and

   WHEREAS funding and programs for students with special needs are presently being provided by Alberta Education, and

   WHEREAS gifted and talented students also have unique needs, interests and abilities, and

   WHEREAS there now exist improved delivery systems for programs for gifted and talented students; therefore

   BE IT RESOLVED that Alberta Education be urged to fund programs for gifted and talented students. (October 1980)

In 1981 Alberta Education replicated the 1978 Canadian Education Association survey of local educational programs to find out how many programs for the gifted and talented were being offered and what type they were (Weber, 1981). However, the 1981 Alberta Education survey was strictly quantitative and not qualitative; it reviewed what programs existed without attempting to evaluate how effective or appropriate they were.

The findings of the survey (Weber, 1981) indicated that Alberta's programs for gifted and talented pupils are fairly similar to those in the rest of Canada. Throughout Canada, 37% of the school boards made some provision for educational programs for gifted and talented pupils; in Alberta, 30% provided such programs. In Edmonton and Calgary three out of the four school boards provided some services, as did 50% of small cities, 24% of divisions and counties, and 27% of other independent school boards.

There was a difference between the Canadian Education Association study and the Alberta study regarding the most popular type of program offered: independent study (work done individually either in the classroom or outside of it) rated first in the Canadian results while Alberta schools

tended to set up special part-time classes.[3] Educators in both surveys indicated that high performance was the most important criterion for selecting students to participate in the programs.

In a departure from the Canadian Education Association survey format, the Alberta Education study's description of school programs in Alberta for gifted and talented pupils also included enrolment counts. An estimated 3,604 pupils, or less than 1% of the grades 1 to 12 student population, was participating in a special program of some sort during the 1980-81 school year.

Some Alberta schools and school jurisdictions are already offering programs for gifted and talented pupils; however, educators and members of the public are concerned that all Alberta schools do not offer such programs. As well, many established programs are in the early stages of development and are therefore vulnerable to elimination or reduction in times of fiscal restraint. Hence, many of the province's gifted and talented pupils are not receiving the necessary opportunities and encouragement to develop to their fullest capacities.

In order to provide guidance about future provisions for the education of the gifted and talented in Alberta, the Honourable David King, Minister of Education, established a Task Force on Gifted and Talented Pupils in January 1982. The Task Force was assigned the responsibility of obtaining information and developing recommendations for future approaches to the education of the gifted and talented.

The Task Force and Its Mandate

The Task Force consisted of nine members who represented eight groups having a major interest in the education of the gifted and talented. The membership was as follows:

Alberta Education	- Dr. Heleen J. McLeod, Chairman
Alberta School Trustees' Association	- Dr. Rhonda Collins, Pincher Creek

3. Further details about various program delivery strategies appear on pp. 28 - 31 of this report.

Alberta Teachers' Association	- Mr. Lloyd Kozak, Calgary
Conference of Alberta School Superintendents	- Mr. Gerry Mazer, Grande Prairie
Public at Large[4]	- Mrs. Carol Loree, Olds - Mrs. Judy Hunt, Edmonton
Public Colleges of Alberta	- Dr. Dick Huddleston, Red Deer
Universities Co-ordinating Council	- Dr. Anita Li, Calgary
University Senate	- Mr. Pierre Gariepy, Edmonton (Resigned December 1982 due to ill health)

Several persons from Alberta Education served as support staff to the Task Force. Dr. Clarence Rhodes acted as liaison person between the Planning Services Branch of Alberta Education and the Task Force. Mrs. Sabita Jaipaul and Dr. Terrance Mott of the Special Educational Services Branch of Alberta Education acted as recording secretary and executive secretary respectively. Mrs. Anita Jenkins was commissioned to provide editing services. Mrs. Diolinda Antunes of the Special Educational Services Branch of Alberta Education provided typing services.

The Task Force met on thirteen occasions over a period of nine months, between July 1982 and March 1983.

The Task Force was charged with studying and developing recommendations for appropriate methods of educating gifted and talented pupils in Alberta. The Ministerial Order described the mandate as follows:

1. To define "gifted and talented pupils", within the grades 1 to 12 context.

2. To examine and evaluate[5] related programs and services in Alberta and elsewhere for gifted and talented pupils, including the compilation of information and data from current research.

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4. The Ministerial Order designated two representatives of the public at large.

5. The Task Force found that the time available did not allow for evaluation activities. Information regarding "programs and services in Alberta and elsewhere" was provided mainly through written submissions and a study by Sillito and Wilde (1983).

3. To determine the most appropriate ways of serving or providing for gifted and talented pupils in Alberta.

4. To make recommendations to the Minister of Education with regard to findings.

Methodology

The major purpose of the Task Force's study was to provide a suitable context and data base from which appropriate recommendations could be developed. The Task Force did not attempt to conduct a comprehensive analysis of the phenomena of giftedness and talentedness. The vast literature on this topic is replete with varying speculations as to the nature of giftedness[6], the definition and identification of the gifted and talented, and methods of providing for their educational needs.

After much deliberation the Task Force decided that rather than conduct its own literature survey, and thus duplicate work already being done, it would use information available from other sources. The Task Force was aware that Drs. Mel Sillito and Warren Wilde had at that time almost completed a comprehensive study of the education of gifted and talented pupils. Using questionnaires, interviews and on-site visits, Drs. Sillito and Wilde had compiled non-statistical and descriptive data on current programs for the gifted and talented throughout Canada and the United States. They also had reviewed the literature in depth. Drs. Sillito and Wilde met with the Task Force several times to explain the nature and scope of their research, and they made the information in their report available to the Task Force.

In order to obtain further information about the Alberta situation and encourage extensive input from throughout the province, the Task Force placed advertisements in a number of Alberta newspapers inviting written submissions from the public regarding the education of the gifted and talented (see Appendix A). An information bulletin inviting written submissions was also sent to all Alberta weekly newspapers, school board

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6. In this report the term "giftedness" is used to refer to both giftedness and talentedness, that is, having exceptional qualities at the high end of the continuum.

chairmen, school superintendents, and various interest groups including the Alberta Teachers' Association, the Alberta School Trustees' Association and deans of Alberta universities. The Task Force received 177 written submissions, which provided much useful information.

The Task Force later wrote a letter to those individuals, groups and agencies who had provided written submissions, inviting them to present their views orally (see letter in Appendix B). The Task Force membership met with the presenters on November 16, 1982 in Calgary and on November 25th and 26th in Edmonton. There were 16 presentations in Calgary and 25 in Edmonton. The oral presentations, although essentially similar in content to the written submissions provided earlier, were extremely useful in that they reinforced or emphasized certain ideas contained in the written submissions and permitted individuals and groups to explain these ideas more fully.

In summary, the Task Force essentially relied on three sources of information: the literature (particularly a study by Sillito and Wilde, Educating the Gifted, Alberta Education 1983), written and oral submissions, and the combined knowledge and experience of Task Force members.

Basic Principles and Assumptions

The Task Force developed the following basic principles and assumptions as a framework for its discussions and deliberations.

1. Gifted and talented pupils have special needs.
2. There are pupils in Alberta schools whose gifts and special talents are not being adequately developed by the regular school program.
3. Parents, educators and the community share responsibility for the education of the gifted and talented. (See Goals of Basic Education for Alberta, adopted by the Legislature of the Province of Alberta in 1978.)
4. Schools are guided by the philosophy that education has for its purpose the maximum development of each child so that he or she may have the knowledge, skills, attitudes, appreciations and abilities that will

enable him or her to live a full, happy and useful life. Hence, all Alberta school jurisdictions have a responsibility to provide an appropriate education for their gifted and talented pupils.

5. Education of the gifted and talented requires leadership and support.
6. Teachers play a vital role in the education of gifted and talented pupils.
7. An adequate program for gifted and talented pupils requires the provision of appropriate support services for pupils, teachers and parents. These services are provided by pupil personnel professionals and administrators.
8. Gifted and talented children need direction, inspiration, challenge, counselling and guidance. Attention, respect and nurturing should also be components of each program for gifted and talented children.

II FINDINGS

This section of the report first provides general information about written submissions to the Task Force -- where the submissions came from and the subjects they dealt with -- and then presents the findings of the Task Force in six general areas: the nature of giftedness, identification procedures, programs and delivery systems, inservice education and training of teachers, evaluation and provincial initiatives.

As indicated in Table 1, the Task Force received written submissions from throughout the province. Approximately 50% were from Zone 3, and approximately 28% were from Zone 5. The majority of written submissions (approximately 47%) were from Edmonton and Calgary, while 30% were from rural areas of the province.

Students from Holyrood School in Edmonton, Oakley Centre in Calgary and Smoky Lake Elementary School submitted written testimonials of their perceptions of the value of their programs for gifted and talented pupils.

Table 2 identifies several of the issues and topics which individuals, organizations and agencies discussed in their written submissions. It is important to note that the writers presented open-ended briefs; no structured questionnaires or lists of questions were used. Consequently, the absence of an issue or topic from Table 2 does not necessarily indicate a lack of interest in or concern about that subject.

TABLE 1

GEOGRAPHIC DISTRIBUTION OF WRITTEN RESPONSES

ZONE ONE *		ZONE TWO	ZONE THREE		
Small** Urban	Rural	Rural	Large Urban (Edmonton)	Small Urban	Rural
2	7	6	44	30	16
(1.1%)	(4.0%)	(3.4%)	(24.8%)	(17.0%)	(9.0%)

ZONE FOUR		ZONE FIVE		ZONE SIX	
Small Urban	Rural	Large Urban (Calgary)	Rural	Small Urban	Rural
2	8	39	11	7	5
(1.1%)	(4.5%)	(22.0%)	(6.2%)	(4.0%)	(2.9%)

	Large Urban (Edmonton & Calgary)	Small Urban	Rural	N
GRAND TOTALS	83	41	53	177
	(46.9%)	(23.1%)	(30.0%)	

*Zones refer to the six regions of Alberta as defined by Alberta Education in establishing its Regional Offices of Education (see accompanying map, Figure 1).

**Small Urban - Sherwood Park, Lethbridge, Medicine Hat, Grande Prairie, Red Deer.

Figure 1 Education Zones in Alberta

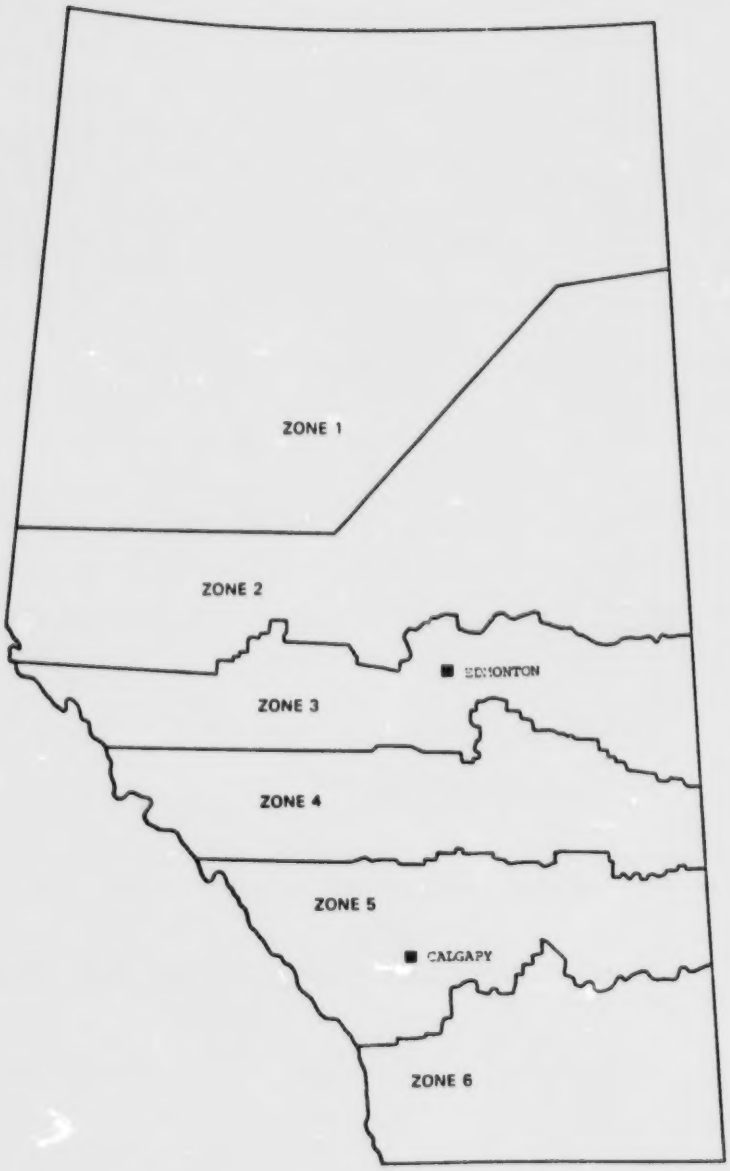


TABLE 2

ISSUES AND TOPICS IDENTIFIED IN WRITTEN SUBMISSIONS

TOPIC	ISSUES
Definition	. Favour broad definition . Favour restrictive definition . Definition is not possible . Require separate definitions for the gifted and talented
Identification	. Need for early identification . How can you identify them? . Concern about what psychological effect identification procedures will have on students and their parents . How do you identify the culturally and linguistically different? . Need multi-dimensional criteria in the identification process . Use of intelligence tests
Program Considerations (Concerns)	. Lack of enrichment materials . Lack of adequate programming . Too much enrichment now, with no stimulation or challenge . Lack of appropriate programs for Natives and culturally different children

TABLE 2 (cont'd)

TOPIC	ISSUES
Program Considerations (Suggestions for Improvement)	. Require vocational, educational and personal counselling . Need enrichment . Need to use computer technology as a resource . Need hobbies, athletics, work experience . Need special programs . Need special schools . Need upgraded early childhood education experiences . Need pull-out classes . Should not segregate gifted and talented children . Advocate a "voucher" system . Advocate differentiated curriculum . Need involvement of parents . Need "challenge" tests . School boards need to provide inservice
Training of Teachers	. All classroom teachers require specialized training to understand the needs of the gifted and talented . Teachers of the gifted and talented require specialized training
Provincial Initiatives	. Need additional funding . Require mandatory legislation . Alberta Education needs to develop enrichment materials . Alberta Education needs to provide a clearinghouse function to assist school jurisdictions in identifying suitable resources . Alberta Education needs to provide regional office consultants for the gifted and talented

TABLE 2 (cont'd)

TOPIC	ISSUES
Community Involvement	. Need support system of volunteers to supplement the work of professional staff
Description of Actual Experiences	. Parents expressed concerns about the education of their gifted/talented children . Support was provided for the Oakley Centre project . Parents and educators from rural areas reported that they encounter special problems in providing programs and services

Programs in Alberta Schools

In addition to discussing subjects such as those listed in Table 2, a number of written submissions described or referred to educational programs for the gifted and talented which now exist in Alberta. Following is an annotated list of some programs which were identified.

Calgary Catholic School District #1 - Education Plus. Education Plus is a pilot project involving 51 pupils in grades 4 and 6 in nine different schools in the system. The students have been identified by means of a multi-dimensional approach for participation in an academically enriched program which involves bringing in-school support to the pupils in their home school setting. An itinerant teacher visits the schools to offer special lessons, and specialist assistance is provided to classroom teachers.

Calgary School District #19 - Education Assistance Services for Gifted Children. The Calgary Board of Education offers a variety of direct services to identified gifted and/or talented children in 64 Calgary schools and provides teachers in all Calgary public schools with consultative services and access to materials in a resource centre.

Calgary School District #19 - Oakley Centre for the Gifted and Talented. This segregated school, which was established through partial funding from a private source, serves about 200 pupils between the ages of 9 and 13. The curriculum is adapted to suit the pupils, who work at their own levels in non-graded groups or individually. The pupil-teacher ratio is approximately 13 to 1, and staff members have some special training in teaching gifted and talented pupils.

Calgary School District #19 - Science Enrichment Program. The science enrichment program helps senior high school students who are gifted in the sciences to find mentors among faculty members at the University of Calgary.

Camrose School District #1315. For the past six years, Camrose schools have been providing a pull-out program for gifted and talented pupils in grades 3 to 6. Activities, which take place one half-day per week, include individual research in areas of particular interest, special games, field trips and cultural and archeological studies. The emphasis is on academic challenges, and students receive this program in their home elementary school to eliminate transportation problems.

County of Barrhead #11 - Challenge Program. About 8% of the pupil population is identified through multiple criteria for participation in a pull-out program. The selected pupils spend some time during each week engaged in special activities designed for the more capable.

County of Mountain View #17 - Olds Elementary School. This school has an "Enrichment Project" in which teachers are encouraged to offer general curriculum enrichment in their classrooms, and certain pupils are pulled out of classes for work in the higher level thinking skills. The pull-out classes, which have a maximum of 10 pupils, are held in language arts and mathematics skills centres.

County of Parkland #31 provides for gifted and talented pupils through enrichment, pull-out classes and five-year streaming (in Stony Plain). In two elementary schools the county is conducting a pilot project which involves partial withdrawal of selected pupils for a minimum of three hours per week. Multiple criteria are used to select the pupils, and the special classes emphasize academic activities.

County of Strathcona #20 has a "challenge program" which involves partial pull-out of students in grades 4, 5 and 6.

County of Wetaskiwin #10 - Winfield School. For two years, gifted pupils in grades 3 to 9 have had the opportunity to participate in an enrichment program. Pupils explore areas of interest and participate in learning activities designed to develop logical and creative thinking;

skills in research, communication and independent work; and social and interpersonal relationships.

Edmonton School District #7 - Old Scona Academic High School. Old Scona provides an academic curriculum (mathematics, science, English, social studies, languages) in a small-school setting. The program is directed to pupils who wish to achieve high academic performance and prepare for university studies.

Grande Prairie School District #2357 - SOAR Program. SOAR, which has been in operation for about four years, is a pull-out program for gifted students in grades 3 to 6. Pupils in each grade participate for two half-days per week at a centralized location in one school.

International Baccalaureate programs, which originated in European private schools, are becoming popular in a number of Alberta senior high schools in the Edmonton and Calgary public school districts. Participating pupils study towards special examinations in academic subjects which are set by the International Baccalaureate office in Geneva, Switzerland.

Lac La Biche School Division #51 - Vera M. Welsh Elementary and Dr. Swift Junior High Schools. Each of these schools provides an enrichment room for the gifted. Pupils visit the enrichment rooms at various times according to their particular needs and interests. Time spent in these resource rooms ranges from 38 to 180 minutes per week. The program is broad and varied in scope to allow for individual interests and/or talents.

Lethbridge Public School District #51. Some schools offer three 40-minute periods per week of special group and individual activities to gifted pupils in grades 1 to 9. Activities include computer instruction, projects and mentorship arrangements with community members.

Mount Royal College Academy Program for Gifted Youth. This program offers training for gifted young musicians in the Calgary area.

Peace River School District #10 - Kennedy Elementary School, Grimshaw. Kennedy School has established a "Challenge" program for the gifted in which grades 3 to 7 pupils are provided with a pull-out program for ten school periods each week. Emphasis is placed on intellectual stimulation and development of creativity. Students are trained to process information through the categories of Bloom's cognitive and affective domains. Program materials are selected according to individual pupil interest and aptitude.

Pincher Creek School Division #29 - Project Talent. In 1980, Pincher Creek School Division hired a half-time resource teacher to serve teachers, parents and pupils involved in educational programs for the gifted and talented. The resource teacher works directly with pupils and teachers. Pupils receive enrichment activities within the regular classroom and are also pulled out for special classes according to their particular needs and interests. Also, the school division has stocked a resource centre with materials for the education of the gifted.

PLATO, University of Alberta. PLATO (Programmed Logic for Automatic Teaching Operation) is an interactive computer-based education system in which students, instructors and courseware designers may create and deliver instruction. PLATO can free instructors to help students individually. Pupils from some school jurisdictions in Alberta have had the opportunity to use the PLATO system to study subjects ranging from elementary mathematics and language skills to university level physics.

Sherwood Park Catholic School District #105 has special programs for academically gifted children in grades 4, 5 and 6. These children spend two half-days per week in enrichment activities which involve classroom teachers, parents and community resources. The program, which has been in effect since March 1980, serves 2.5% of the pupil population.

SMART (Saturday Mathematical Activities, Recreation and Tutorial Program). In this Edmonton program, elementary and junior high school pupils participate in diverse mathematical experiences on Saturdays.

Willow Creek School Division #28 - W.A. Day Elementary School, Fort MacLeod. Fort MacLeod's gifted students in grades 2 and 3 have been provided with enrichment classes in a resource room for the past three years. Recently, the program has expanded to include field trips and a parents' group which cooperates in running an after-school mentor program utilizing community resources people. Twenty-four mentors, including parents, teachers, peers and various community people, are working with children in such areas as art, calligraphy, computers, gardening, horses, mathematics, microscopes, music, photography, political cartoons, puppets, sports, travel and the oil industry.

The following sections present the findings of the Task Force under appropriate headings.

THE NATURE OF GIFTEDNESS

Definition

Submissions and Task Force Discussions. In its study of giftedness the Task Force found several useful definitions, including the three following, which were developed by J. Renzulli, the United States Office of Education and the Ontario Ministry of Education.

Renzulli (1975) says:

> Giftedness consists of an interaction among three basic clusters of human traits - these clusters being above-average general abilities, high levels of task commitment, and high levels of creativity. Gifted and talented children are those possessing or capable of developing this composite set of traits and applying them to any potentially valuable area of human performance. Children who manifest or are capable of developing an interaction among the three clusters require a wide variety of educational opportunities and services that are not ordinarily provided through regular instructional programs.

According to the United States Office of Education:

> Gifted and talented children are those identified by professionally qualified persons who by virtue of outstanding abilities are capable of high performance. These are children who require differentiated educational programs and/or services beyond those normally provided by the regular school program in order to realize their contribution to self and society.
>
> Children capable of high performance include those with demonstrated achievement and/or potential ability in any of the following areas, singly or in combination:
>
> a. general intellectual ability
> b. specific academic aptitude
> c. creative or productive thinking
> d. leadership ability
> e. visual and performing arts
> f. psychomotor ability (Marland, 1971, p. ix).

The Ontario Ministry of Education states that the term "gifted" refers to "pupils of a superior degree of general intellectual ability. Such pupils are so advanced of the regular class population that they require special provisions beyond the normal program" (Borthwick et al., p. 16). The Ministry uses the term "talented" to refer to "those pupils who excel in an area such as music, visual arts, drama, athletics, or in specific academic areas." Under this definition gifted/talented children may be identified within one of the following groups:

a. intellectual (academically outstanding)
b. aesthetic (outstanding in the creative arts)
c. kinesthetic (outstanding in coordination and motor abilities)
d. psycho-social (outstanding in human relations and leadership ability).

Regarding the definition of giftedness, submissions and Task Force discussions indicated that:

1. The gifted and talented are not a homogeneous group.
2. Giftedness can be defined in a variety of ways ranging from a measure of academic or intellectual abilities exclusively (uni-dimensional) to

the inclusion of a broad range of additional abilities (multi-dimensional) such as creativity, task commitment, leadership, visual and performing arts ability and psychomotor skills.

3. A broad definition of giftedness needs to be adopted, and school jurisdictions need encouragement to make use of this definition as it suits local conditions.

Sillito and Wilde Report. Sillito and Wilde refer to the difficulties associated with arriving at a standard definition of the gifted and talented. Although in common usage giftedness is spoken of as though it is a well defined concept leading to a clear understanding of who are "the gifted", the definition is by no means clear in educational practice.

> There is confusion in terminology; disagreement over which exceptionalities either singly or in combination qualify a child for the designation of gifted; ignorance about the compounding effects of combinations of exceptionalities; lack of knowledge about most individual exceptionalities and about the relationship of personality characteristics to giftedness; and of course, the continuing debate over genetic endowment versus environment contributions (Sillito and Wilde, p. 10).

Models of Giftedness

Several researchers have devised models as a means of conceptualizing in pictorial form what giftedness is.

Submissions and Task Force Discussions. Submissions and Task Force discussions indicated that various models of giftedness were being used in different parts of Alberta. Some conclusions arising from submissions were:

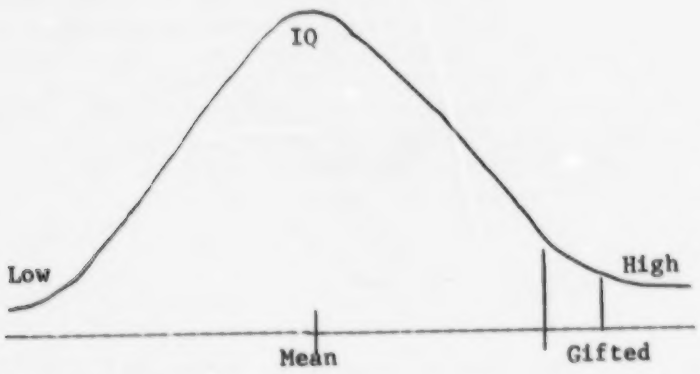
1. Models of giftedness do not reveal the precise nature of giftedness but are useful as a framework for describing giftedness.
2. School systems undertaking an educational program for the gifted and talented could adopt a model of giftedness as a framework for the provision of programs.

3. The multi-dimensional nature of giftedness has implications for identification procedures for gifted and talented pupils.

Sillito and Wilde Report. Five models are particularly illustrative of current thinking about giftedness (Sillito and Wilde, pp. 45-50).

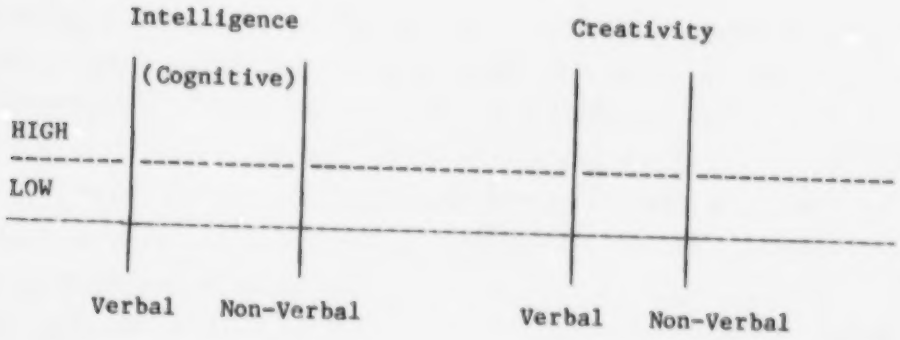
Terman, who essentially defined the gifted as those who achieve very high scores on intelligence tests, used the model illustrated in Figure 2. Terman believed that the cognitively most able would become the most productive in their careers.

Figure 2 Terman Model of Giftedness



Steven Schuman (Watters and Schuman, 1980), building on work on creativity by Paul Torrance and others, developed a model of giftedness which combined cognitive ability and creative ability (Figure 3). Giftedness, as defined by this model, is an interaction or combination of high verbal cognitive ability and high non-verbal cognitive ability with high verbal creative ability and high non-verbal creative ability.

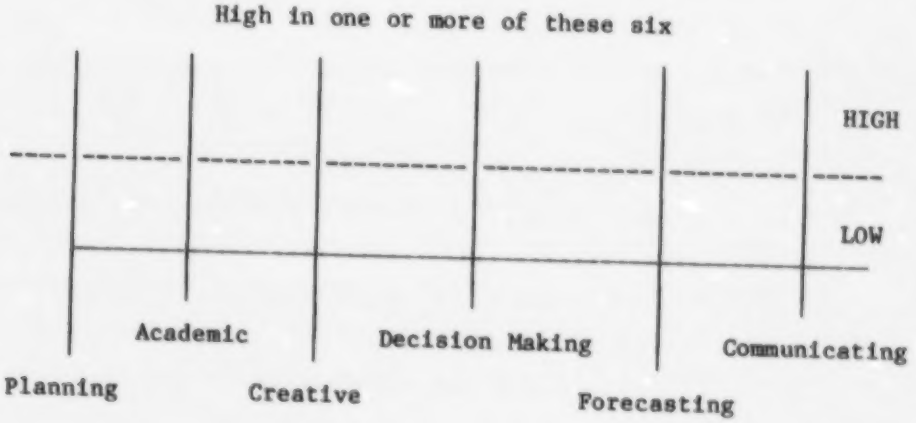
Figure 3 Schuman-Torrance Model of Giftedness



Sillito and Wilde describe the Taylor, Renzulli and New York State University models as follows:

> Calvin Taylor (1973), building in part upon the work of Guilford, found six intellectual talents: academic, creative, planning, forecasting, deciding, and communicating (Figure 4). These he found to be relatively independent of each other. All are capable of extension and development by education. Above average ability in any one of the six constitutes potential giftedness. The consequence of the independence and the definition is that nearly all children are potentially gifted and require only the development of the relevant and the necessary supporting skills (p. 45).

Figure 4 Taylor Model of Giftedness



Joseph Renzulli (1968), working post facto from biographical materials on achieved giftedness, has concluded that there are three attribute areas responsible for achieving recognition as gifted (Figure 5). These are:

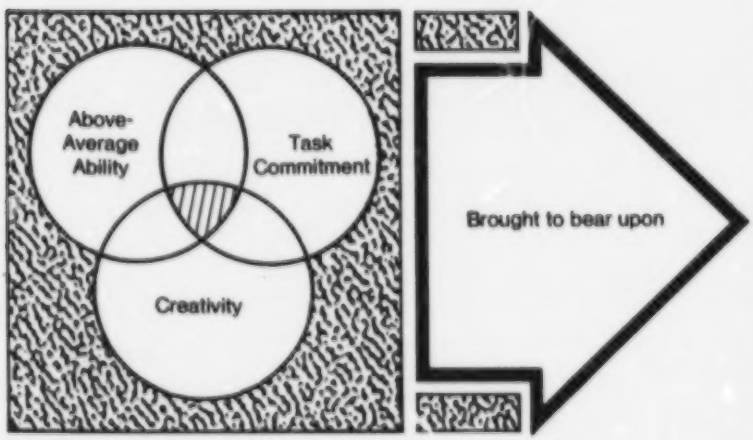
a. above average ability (Renzulli suggests an IQ of 120 plus),
b. high motivation and other traits relating to task commitment, and
c. creativity.

Although each cluster is an equal partner in contributing to giftedness, Renzulli considered that an interaction among all of the three clusters is a necessary condition for a gifted individual. This interaction is represented by the shaded portion of Figure 5.

The one thing that the three clusters have in common is that each can be brought to bear on a multitude of specific performance areas. The large arrow in Figure 5 represents the interaction between the overlap of clusters and any performance area to which the overlap might be applied.

Figure 5 Renzulli Model of Giftedness

(Adapted from "What Makes Giftedness?", Phi Delta Kappan, November 1978).


Above-Average Ability
Task Commitment
Creativity
Brought to bear upon
GENERAL PERFORMANCE AREAS
Mathematics • Visual Arts • Physical Sciences • Philosophy • Social Sciences • Law • Religion • Language Arts • Music • Life Sciences • Movement Arts
SPECIFIC PERFORMANCE AREAS
Cartooning • Astronomy • Public Opinion Polling • Jewelry Design • Map Making • Choreography • Biography • Film Making • Statistics • Local History • Electronics • Musical Composition • Landscape Architecture • Chemistry • Demography • Microphotography • City Planning • Pollution Control • Poetry • Fashion Design • Weaving • Play Writing • Advertising • Costume Design • Meteorology • Puppetry • Marketing • Game Design • Journalism • Electronic Music • Child Care • Consumer Protection • Cooking • Ornithology • Furniture Design • Navigation • Geneology • Sculpture • Wildlife Management • Set Design • Agricultural Research • Animal Learning • Film Criticism • Etc. • Etc. • Etc.

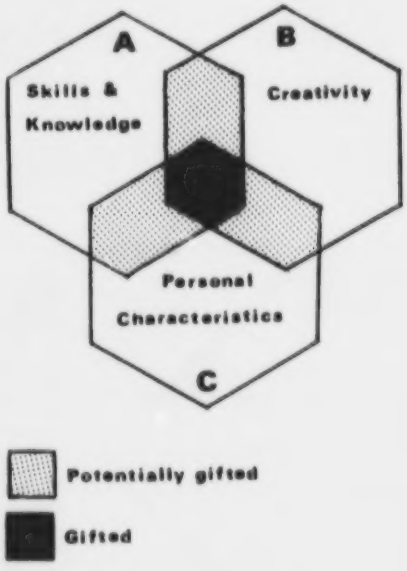
The University of the State of New York, in a publication entitled Guidelines for the Identification of the Gifted and Talented, (McNeill, 1980) presented a model which extends the concept of giftedness and suggests what would be meant by potential giftedness. The model is most simply explained by use of a Venn diagram (Figure 6).

Giftedness, as represented by the black area, requires a high degree of aptitude for achieving knowledge and skill, creativity, and certain personal characteristics. In the academic area the gifted are one or more standard deviations above the mean on an individual test (IQ) and achieve accordingly. In addition they are creative in enunciating and solving problems. Their classroom behavior reveals their interest, commitment, motivation and self-confidence. The combination of these three sets of characteristics -- aptitude, creativity and personality traits -- are revealed by the students' producing and reproducing ideas, products and processes of value....

Figure 6 New York State University Model of Giftedness (Venn Diagram)

Hexagon A represents the capacity for acquiring skills and knowledge in all areas relating to a particular kind of giftedness.

Hexagon B represents those aspects of creativity relevant to finding and solving problems.



Hexagon C represents those personal characteristics, such as motivation and initiative, required to acquire the relevant knowledge and skills and to use them in a creative endeavor.

Figure 6 illustrates different aspects of giftedness. The gifted are represented by the black area common to all three hexagons. The three shaded areas common to any two of the three hexagons represent the potentially gifted. That area common to hexagons A and C but not B is called the talent area and students represented are potentially gifted, requiring only the awakening and development of their creativity in order to become gifted. Those in the area common to A and B but not C require development in the psychosocial area and those in B and C but not A require development in their capability for acquiring skills and knowledge in order to become gifted (Sillito and Wilde, pp. 47-50).

IDENTIFICATION PROCEDURES

Submissions and Task Force Discussions. Submissions and Task Force discussions indicated that:

1. Identification procedures need to be multi-dimensional and could include, for example, group and individual intellectual assessments, teacher nomination, parent nomination, demonstrated school achievement, creativity test scores, special ability tests scores and pupil interests.
2. Identification procedures need to be initiated early in the child's education.
3. Initial screening procedures need to be followed by ongoing individual evaluations.
4. Provision for identifying gifted and talented pupils among culturally and linguistically different groups is needed.
5. There is a shortage of qualified personnel to assist with the identification of gifted and talented pupils.
6. The needs of gifted underachievers are being overlooked.

Sillito and Wilde Report. The most commonly used strategy for identification of gifted and talented pupils is to choose identification processes in terms of a previously accepted definition. Multiple criteria are almost universally used in the identification process. Examples of criteria commonly in use are: group and individual intelligence tests, stan-

dardized achievement tests, aptitude tests, tests of creativity, teacher rating scales, records of counsellors and other pupil personnel workers who have had frequent contact with the pupil, interest inventories, parental interviews, peer judgement (sociometric) procedures, teacher nomination, and pupil products and work samples.

Identification procedures generally include initial screening and a final selection process; they should also have special cases review and appeal procedures.

Despite the use of multiple criteria and various identification procedures, identifying the gifted and talented is very difficult. Some gifted and talented children may fare poorly on standardized tests designed for the majority if they are disadvantaged because of their race or ethnic origin, or if their language is not English. Gifted underachievers may also be overlooked, and preschool children are seldom screened. According to Sillito and Wilde, school jurisdictions should try to ensure that all gifted and talented pupils are appropriately identified and nurtured.

The mere identification of giftedness does not accommodate the needs of the gifted. Nevertheless, a comprehensive identification program is an essential first step in educational planning for the gifted and talented.

PROGRAMS AND DELIVERY SYSTEMS

Effective programming for gifted and talented pupils should take into account their emotional and social development along with their creative and intellectual needs. The gifted and talented have needs in common with other pupils but they also have special needs.

Submissions and Task Force Discussions. Regarding programs and delivery systems, submissions and Task Force discussions indicated that:

1. Gifted and talented pupils need time and opportunity to develop with their social peers as well as their mental peers. The gifted child needs to learn age-appropriate behaviors and develop social acumen. Intellectual development must not ignore physical, emotional and social development.

2. A wide variety of program delivery possibilities exist, such as pull-out, mentorship, tutorials, acceleration, curriculum differentiation, enrichment, segregated classes, the International Baccalaureate program, foreign language enrichment classes and special schools. However, the decision regarding which delivery systems should be used is based on the needs of those served.
3. No one best way to meet the needs of gifted and talented pupils has been identified.
4. Program continuity over the entire spectrum of educational experiences is desirable (that is, a program extending through grades 1 to 12).
5. These programs do not have to be radically different from the regular curriculum; the emphasis must be on curriculum differentiation to match individual needs. Individual work as well as small group work opportunities are desirable.
6. Teachers of the gifted and talented require support systems (human and material resources), including consultants, counsellors, administrators, psychologists and community resources.
7. The selection of teaching staff and administrators requires careful consideration.

Sillito and Wilde Report. The literature suggests that curricula for gifted and talented pupils must be qualitatively differentiated. The need for differentiated curricula is based on "the almost universal conviction that gifted people do think in ways which are qualitatively different" (Sillito and Wilde, p. 152). Curriculum building should therefore proceed on the basis of a) the nature of the gifted and talented as learners, and b) the nature of giftedness and accepted educational objectives.

The models of giftedness discussed earlier are involved here, since the model adopted will shape the curriculum. The analysis, synthesis and evaluation levels of Bloom's (1956) taxonomy of educational objectives in the cognitive domain are useful in addressing the nature of giftedness and describing the nature of the gifted as learners. Since the literature also indicates that gifted and talented pupils usually mature much more rapidly than their age peers in the affective domain, special attention needs to be paid as well to the upper levels of the taxonomies in that domain.

Sillito and Wilde say:

> Curriculum development for the gifted population has much in common with curriculum formation generally but there are additionally special challenges for the school district. Administrators and teachers must ensure the inclusion of core knowledge and at the same time provide sufficient challenge to accommodate the special gifts of all learners (p. 164).

Regarding delivery systems, Sillito and Wilde say:

> Approximately ten different types of readily observable delivery systems or groupings are used by the numerous districts offering programs for the gifted. Each district makes its own modifications to suit needs and resources but the basic types are quite distinguishable. Some districts have employed more than one system and in some cases two or more small rural districts have pooled their resources to offer programs (p. 169).

Sillito and Wilde describe how each type of delivery system tends to be implemented in North America (pp. 169- 174):

> Early Admission. In this approach children are allowed to enter the school system prior to the specified chronological age. The research results are quite positive since it seems that at this stage mental age allows the children to find more commonality with developed traits than does chronological age....
>
> Acceleration. Students can accelerate either by "skipping" a grade (seldom recommended) or by moving through the content of the grade levels at an accelerated pace. There are ungraded primary schools which allow the student to progress at his/her own pace. There are high schools which allow students to take extra loads and finish more quickly. The bottleneck appears to be at the middle grades or junior high schools where students are seldom allowed to accelerate their program because of stringent administrative policies.
>
> Under an acceleration approach, students are seldom offered anything beyond the normal curriculum but are permitted to progress through the content more quickly. Very few children are offered any guidance in thinking skills, values, appreciations, and creative ways to approach problems outside of what would be given to every student in the normal curriculum. Acceleration is generally reserved for the academic subjects only.

Enrichment. Enrichment is seen as the domain of every teacher in every classroom but is especially emphasized for gifted children. In this system children are given extra or different materials from the regular curriculum and in some cases are guided toward special projects of interest. Much enrichment can be done for everyone in the classroom, one example being special field trips. However, at times a few selected students in a class will be clustered together for an enrichment project.

Pull-out. A more concentrated form of enrichment is the school pull-out or district pull-out where selected students go to a special room or school for enrichment. This could be done at regularly scheduled times of a day or week, for one period, or for half-days and in some cases full days, depending upon the situation. One teacher is designated to teach the gifted as a part of her/his load or as a full load. Normally with this system the teacher stays in one school and the children travel to that location.

The pull-out system has implications for storing materials and transporting students. When materials can be housed in one location it is more efficient for the instructor. However, transportation within a district can be a problem since children sometimes must be bussed from one side of the city or county to another....

Special Classes and Special Schools. A special class or classes for gifted can be set up within a regular school or one school within a district is designated to offer only programs for the gifted. The curriculum for successive levels is more controlled in these situations but there is still great latitude for each student to explore areas of individual interest....

Itinerant Teachers. In this system one or more teachers are designated to travel to the schools to offer programs for the gifted. These teachers often go to several schools where they meet with groups for periods of time ranging from one period a week to two days per week. An extremely large number of management combinations can be accommodated under this system....

Special Summer Programs. These programs are especially popular for large districts or for a conglomerate of districts where the gifted are invited to a special week-long (or longer) camp in a designated location. At this camp students are guided by qualified instructors in such areas as arts experiences, athletics and traditional academic subjects. Emphasis is on achievement in an informal setting with different materials, techniques and activities than would normally be encountered in the school system.

Advanced Placement. Under this arrangement universities and colleges give advanced standing to students who take specifically approved courses at the high school. Students can thus complete their high school requirements and at the same time qualify for university or college credit by taking extra courses.... Students, in essence, accelerate their progress through the school system, including post-secondary institutions.

Independent Study. Gifted students who have a definite interest area are often encouraged to explore this area in more depth through independent work. Teachers monitor progress and provide guidance. This experience can be of great benefit providing the student has adequate prerequisite skills to carry out the study and the teacher is sufficiently caring and knowledgeable to give appropriate assistance.

Seminars. Mini-courses (of a type) developed especially for gifted students are often held on Saturday or an evening where identified and acceptable students meet to discuss topics of concern, do research or learn a specific skill. Sometimes parents are invited to attend and engage in discussion or participate in cooperative efforts with the gifted students. This is not much different from special interest classes conducted by a community organization, college or private enterprise for children and adults. Students attend on a voluntary basis and are sometimes charged a nominal fee but usually this is part of the school operating budget....

Community Sponsors or Tutors. Often called a mentorship approach, this is an enrichment endeavor combined with independent study where the whole community becomes the domain for learning. Sometimes volunteers are solicited from the community and placed on a list for students to choose from while at other times the student is aided to identify his/her own mentor. This approach has proven very successful as experts, recognized leaders and craftsmen have become the personal resource and tutor for the gifted student. It is in a sense an individualized apprenticeship program. The area of main concern with this approach is one of grading the learning and finding adequate sponsors to meet student needs.

All of the above approaches are viable. The appropriate selection depends upon the resources of the school district and the objectives to be accomplished by a gifted program. Some lend themselves well to a structured curriculum while others are much more open-ended. To evaluate one over another depends upon the intended outcomes of learning for the gifted.

Gallagher et al. (1982) conducted a survey of 1200 teachers, educational administrators and parents in the United States to determine the preferred strategies for special education of the gifted and talented at the elementary and secondary levels. The survey showed that the resource room, which combines separate classes with a specially trained teacher for an hour or more a day with experience in the heterogeneous regular classroom, was preferred at the elementary level by a 2:1 margin. Special classes which included only gifted children were the second choice. The teacher-consultant strategy, in which the regular teacher aided by trained consultants provided differentiated instruction in the regular classroom, was the third choice.

At the secondary level, advanced placement or special classes were the most favored strategies, followed by independent study. The resource room concept was no longer favored because of the changed structure of the secondary schools that focusses on content area study.

INSERVICE EDUCATION AND TRAINING OF TEACHERS

Selecting the teachers is probably the most important decision to be made when establishing programs for the gifted and talented. While most people realize the importance of this decision, there is unfortunately no consensus in the literature as to the characteristics which teachers of the gifted and talented must possess.

Submissions and Task Force Discussions. Submissions and Task Force discussions indicated that:

1. Teacher selection is vital to a program of high quality for the gifted and talented.
2. Programs for the gifted and talented cannot begin or survive without the support of administrators, regular classroom teachers, counsellors, psychologists, resource specialists and parents. Each of these groups has a significant part to play.
3. Well planned inservice education programs are vital to teachers of the gifted and talented.

4. All classroom teachers require training to recognize the characteristics of gifted and talented children in the pupils they teach.
5. Teachers, counsellors and administrators require awareness of and commitment to the needs of the gifted and talented.
6. There is a real need for more university courses dealing with the education of the gifted and talented.
7. Some awareness and initiative have been shown recently regarding inclusion of courses on educating gifted and talented children in teacher training programs. For example, for the past few years the University of Calgary has been regularly offering one undergraduate course on gifted and talented children as well as graduate courses on an ad hoc basis. Recently, the University of Calgary has also offered three or four short "inservice component" courses for teachers in the field. The University of Alberta and the University of Lethbridge have also offered special undergraduate courses on educating gifted and talented children, but not on a regular basis.

Sillito and Wilde Report. Specialists also agree that teachers of the gifted and talented "need special skills and knowledge in order to provide the necessary assistance and establish a learning environment conducive to developing the students' potential" (Sillito and Wilde, p. 185). Many specialists believe that while some characteristics come with the teacher, many can be developed.

Sillito and Wilde say:

> Supervisors of teachers at the local level are usually charged with the responsibility of providing adequate inservice programs. These sessions are of little value unless they promote continued development on the part of the teacher. They must deal with the theoretical aspects of learning for the gifted as well as provide some specific examples....
>
> Inservice sessions should promote unique possibilities for the gifted which allow for the development of thinking and creativity in the child as well as the teacher. There is a place for theoretical activities which include the basic principles, models and theories pertaining to the gifted and which act as a springboard to further study. Demonstrations with

children have proven to be fundamental in illustrating the application of principles. This method, more than any other, has resulted in carry-over to classroom practice. The use of film and videotape extracts of exemplary teaching situations has also proven successful since it allows trainees to capture the message in shorter periods of time.

There is a need to provide information to the participants about every phase of the curriculum building process. Teachers need to focus on goals and objectives to gain a vision of the destination. They then can be given some examples of routes to travel, methods most appropriate to the terrain and ways to evaluate whether they have reached the terminus.

Written materials, while essential to the sessions, should not be voluminous. A careful selection of appropriate authors, catalogues and forms distributed sparingly at each session over a prolonged period of time seems to have been the most successful way of encouraging most teachers toward independent study. Helping teachers discriminate between the useful and the "junk", according to their purposes, is essential (pp. 186-187).

The Sillito and Wilde study reveals that, "Too often teachers have attended conferences and collected publishers' materials only to find the materials are inappropriate." Most teachers interviewed emphasized the need to adapt rather than adopt ideas. Since few curriculum materials could be used appropriately in their original form but required reworking and modification to suit the teaching style and situation, Sillito and Wilde conclude that, "A set curriculum for all gifted and talented pupils, laid out in detail, would be ineffective and an unwise investment" (p. 188).

School jurisdictions have been quite innovative in offering inservice education to teachers, according to Sillito and Wilde, who say:

They [school jurisdictions] have provided summer institutes where the participants come on a district-sponsored basis or by their own voluntary contribution. There have been district-sponsored conferences during the day and/or conferences sponsored by a consortium of districts. There have been workshop sessions, class visitations and interdistrict visitations. Sometimes teachers travel several miles to a central location to attend a one-day session at the district office while at other times the sessions convene immediately after

> school or during the evening. One interesting characteristic of teachers of the gifted was their willingness to devote extra time for preparation and sharing without any remuneration. Most of these teachers accepted inservice as a challenge and a necessary part of their teaching commitment (pp. 188-189).

About university training for teachers of the gifted and talented, Sillito and Wilde say:

> Universities have been slow to institute courses for teachers of the gifted. Only a few universities in the United States have well developed graduate studies programs as well as undergraduate courses (p. 189).

Canadian universities have also been slow in implementing training for teachers of the gifted and talented. A few offer one course devoted to educating the gifted and talented, but most incorporate the material into a course on special education, where the emphasis is on the education of the handicappped. McGill seems to have the best developed program at present but some other universities are making plans.

Sillito and Wilde say:

> University programs need to integrate both theoretical structures and practical experiences. The tendency is toward the theoretical where instructors emphasize cognitive models such as Guilford's [Structure of the Intellect], Bloom's Taxonomy and Piaget's stages of development, not unlike what would be offered to regular psychology classes. There is some attempt to deal with the affective domain but this too is often weak and does not meet the specific needs of the gifted. Students who have had the opportunity to combine the theories of cognition, identification and behavioral characteristics of the gifted with instructional methodology and then have a practicum in a school classroom with gifted children seem to derive the greatest benefit from their university experience. This is to be expected since it is borne out in a similar way in other specialist programs (p. 190).

EVALUATION

Submissions and Task Force Discussions. Submissions and Task Force discussion about evaluation suggested that:

1. Student and program evaluation procedures are an important ingredient in the education of the gifted and talented.
2. Student and program evaluation practices should be an integral part of the early development of programs for the gifted and talented.
3. Student and program evaluation practices need to be reviewed periodically after programs are established.

Sillito and Wilde Report.

> So much has been written about evaluation in education, so many programs evaluated and so many students assessed that a [discussion of] evaluation of gifted students and the programs serving them may appear to be redundant. On the contrary, one of the first and most significant conclusions ... based on visits to programs in progress and on the literature, is that,by and large, evaluation is a crucial yet somewhat neglected area whose quality is in need of upgrading. The immense volume of literature and the large number of available reports fail to address adequately the particular needs of education for the gifted (Sillito and Wilde, p. 220).

Most researchers report a great need for systematic and organized efforts to improve the design of program evaluation in the schools. Program evaluation as it now stands is rarely a useful tool for program decision making.

Frequently, instruments used for student evaluation are also inadequate. Sillito and Wilde conclude that the best available instruments for evaluation of gifted students are in the academic component of giftedness, but that even these instruments are relatively weak (p. 227). For instance, Weiss and Gallagher (1982) have stated:

> The available test instruments are weakest precisely in those program areas where gifted education places its major emphasis: the stimulation of higher thought processes and in the mastery of abstract concepts in content fields. Most

achievement tests are designed to provide broad information coverage rather than depth of understanding, and are constructed so that the average student will be able to perform on them. This provides little opportunity to test the highest performance of students. It merely documents knowledge mastery at a generally low level of abstraction (pp. 2-3).

Sillito and Wilde add these comments:

> The validity of tests used with gifted students is questionable. Scores bunch near the top, showing a need for test items that will spread the test-takers. Educators tend to notice the lack of ceiling and neglect the far more important question of validity.
>
> Every standardized test worthy of consideration is based on sampling a "curriculum" with appropriately constructed test items. The basic assumption which is always made in using standardized tests, and which is so often tragically unwarranted, is that the test curriculum adequately fits the actual curriculum presented to the student. In the case of a "qualitatively different" curriculum, which is a major objective in education for the gifted, the probability of a massive misfit approaches 100 percent!
>
> For the gifted, standardized test items often appear ambiguous and the "right" answers turn out to be "wrong" answers, or not the "best" answers. This phenomenon occurs because test-makers cater to the average, but the greater knowledge or thinking ability of the gifted allows these students to pick out errors which are not readily obvious but still make the item inaccurate....
>
> These considerations force the conclusion that standardized tests have serious weaknesses in measuring skills and knowledge of gifted students and where the curriculum is significantly differentiated they are invalid. Furthermore, if the curriculum includes development of divergent thinking (one definition of creativity), the tests having one "right" answer are inappropriate. Most standardized tests are of this kind.
>
> There are tests of creativity. Most of them test the so-called divergent thinking skills of fluency, originality, elaboration and creative problem solving.[7] These are important skills which can be developed through education. But the

---

7. "Flexibility" is also frequently mentioned as a divergent thinking skill.

> tests are criticized, not only because they may not measure higher levels of creative thought but also because of basic differences of informed opinion about the nature of creativity. Weight of opinion holds that creativity is definitely more than divergent thinking. It also involves the extended cognitive abilities spectrum as well as personality attributes. Clark (1979) for example, includes all of the intellect-related human abilities including sensing and intuiting. Needless to say the instrumentation suffers from validity -- again precisely in the higher and more inclusive levels of creative efforts -- because educators are not sure what is to be measured....
>
> Useful devices for evaluating leadership are mainly judgmental in nature: a parent questionnaire, peer nomination and some rating scales have been used to discover indications of leadership potential (pp. 227-229).

Sillito and Wilde found that psychomotor ability is usually measured in terms of athletic achievements. Potentially gifted sculptors, performing musicians, surgeons or architects are seldom discovered during the school years.

In conclusion, the development of appropriate student and program evaluation procedures and instruments will require the involvement of people who are experienced in the evaluation field and knowledgeable about education for gifted and talented pupils.

PROVINCIAL INITIATIVES

In Alberta, responsibility for the delivery of educational programs for gifted and talented pupils lies with each local school jurisdiction in the province; jurisdictions are not, however, required to offer special programs for these pupils. While several Alberta school jurisdictions have made important advances towards meeting the educational needs of the gifted and talented, the Task Force believes strongly that local jurisdictions need additional assistance and encouragement from the provincial department of education.

Alberta Education now has certain funding programs such as the Educational Opportunities Fund, which although not specifically designed for that purpose has been used to provide for the needs of the gifted and talented. The Task Force agrees that special funding for education of the gifted and talented is needed, but that such funding must not be at the expense of existing funded programs. The Task Force also agrees that there is a definite need for leadership at the provincial level.

Task Force discussion and other sources revealed that provincial initiative is needed in several respects. There is a need to provide:

a. provincial legislation to ensure that every exceptional student in Alberta receives an education suited to his or her needs and abilities.
b. appropriate funding to ensure that school jurisdictions can adequately educate their gifted and talented children.
c. provincial coordination, consultation and leadership.
d. provincial support for extracurricular academic activities such as academic subject fairs and olympics.
e. appropriate teacher resource materials and provincial/ regional clearinghouses for teacher access to these materials. (The clearinghouse function might involve collecting successful curriculum modules, program models and resource materials and making these available to teachers throughout the province.)
f. public education about the educational needs of the gifted and talented.
g. inservice training to teachers of the gifted and talented.

After careful consideration of its findings, the Task Force developed a number of conclusions about the education of the gifted and talented and drafted recommendations for action in that regard. These conclusions and recommendations are presented in the following section of this report.

III. CONCLUSIONS AND RECOMMENDATIONS

The Task Force on Gifted and Talented Pupils has determined that there is an urgent and critical need to recognize the gifted and talented children of Alberta and to provide more adequately for their special educational needs. In order to reach their full potentialities, these children must have suitable challenges and profitable educational experiences. The Task Force has found that some schools and school jurisdictions in Alberta are doing a satisfactory job of serving their gifted and talented pupils, within existing resources; however, many schools' provisions for these children are unsatisfactory. The educational needs of gifted and talented children are largely neglected.

The Task Force has concluded that the basic educational goal for gifted and talented pupils is the same as for all other pupils: to develop the pupils' abilities and potentialities in ways consistent with their needs for personal fulfillment and in the best interests of society. Since the gifted and talented have special needs, it seems apparent that schools must develop mechanisms whereby gifted and talented pupils are identified early in their education and subsequently provided with educational programs geared to move them toward productive achievement and self-fulfillment.

The literature suggests that there is no single approach for the appropriate education of these pupils. Programs which now exist in the province may not be suitable for all situations. School jurisdictions require freedom to develop and provide program alternatives for the specific population of pupils they serve.

The Task Force has arrived at several conclusions about providing appropriate educational experiences for and meeting the needs of gifted and talented pupils. Out of these conclusions arise various recommendations for action by those responsible for their education, both at the provincial and local levels. This section of the Task Force report presents each conclusion and its related recommendation(s), followed by a brief commentary which provides a rationale for the recommendation(s) and/or explains by adding relevant details.

Conclusions and recommendations are organized according to broad topic areas: definition, identification, programs, inservice education and training of teachers, other program considerations, research and evaluation, and provincial initiatives. However, this order of presentation is not intended to signify order of priority. Although some recommendations may have broader implications than others, the Task Force considers all of its recommendations to be important. The Task Force also wishes to stress the need for action on all of the recommendations at an early date.

DEFINITION

Conclusion

1. A definition of the gifted and talented pupil is needed, and the definition arrived at needs to be multi-faceted.

Recommendations

It is recommended that:

1.1 Alberta Education accept and use the following definition of gifted and talented pupils:

> Gifted and talented pupils are those who by virtue of outstanding abilities are capable of exceptional performance. These are children who require differentiated provisions and/or programs beyond the regular school program to realize their contribution to self and society.
>
> Children capable of exceptional performance include those with demonstrated achievement and/or potential ability in one or several of the following areas:
>
> a. general intellectual ability,
> b. specific academic aptitude,
> c. creative or productive thinking, and
> d. visual and performing arts.

1.2 Three to five percent of the general school population be used as a guideline as to what proportion of pupils are considered gifted and/or talented, that is, requiring differentiated provisions and/or programs beyond the regular school program.

Commentary

A definition of gifted and talented pupils is important because educators and other persons involved with programs for these pupils need a common concept of who might be served. Also, those involved must know that not all types of exceptionality are served by specific programs. It is hoped that the definition can reduce misunderstanding and confusion in this regard, because parents, teachers and pupils frequently hold varying opinions about the nature of giftedness.

Another purpose of the definition is to communicate the heterogeneous nature of the gifted and talented population. For example, those gifted or talented in the visual or performing arts may or may not also have academic gifts or talents.

Further, a definition provides a basis for all activities associated with programs for gifted and talented pupils: screening, identification, and placement of pupils; development and delivery of curriculum; evaluation; and support activities.

Three to five percent as a guideline for the proportion of gifted and talented pupils arises from a number of sources, including the United States Office of Education (Marland, 1971). Many programs use this guideline. The figures may be set for somewhat pragmatic reasons, including: a) human and financial resources are often limited and b) it is the pupils at the extremes of any distribution who need programs which are most different and divergent from the norm.

Although this percentage may seem small, it should be noted that in Alberta between 12,000 and 22,000 pupils are involved.

IDENTIFICATION

Conclusion

2. Screening and identification processes are needed to select the pupils who will participate in special programs. Gifted and talented children need to be identified as early as possible, and the identification process needs to continue throughout a child's school years. Ideally, identification involves many criteria of different kinds and input from many sources, including teachers and parents.

Recommendations

It is recommended that:

2.1 Alberta Education a) identify (or develop where necessary) appropriate screening and assessment tools for the identification of gifted and talented pupils and b) where feasible, make these available to school jurisdictions through the School Book Branch.

2.2 School jurisdictions be responsible for early and ongoing identification, with: a) screening not later than grades 1 - 2 and again at grades 5 - 6, and b) periodic reviews throughout the pupil's school years.

2.3 Identification involve several different procedures, including initial screening, further assessment and final selection, and be based on several sources of information.

Commentary

Specifically, the identification process should include:

(a) Initial nomination. Input can come from many interest groups and sources such as parents, teachers, counsellors and peers.

(b) Screening. Teacher observation in the classroom; rating scales; pupil's report of his/her interests, hobbies and career expectations; and group tests of achievement, ability and creativity are possible screening devices.

(c) Comprehensive assessment and evaluation. Information gathered will depend in part on the nature of the program to be initiated. In addition to information already gathered in initial nomination and screening, information such as the following should be collected: developmental information from parents, academic history from school records, interview information from various sources, personality assessment, individual intelligence test results, assessment of creative thinking skills, observation of pupils in various environments, and the pupil's products, accomplishments and awards.

(d) Selection and placement. Local school jurisdictions should be encouraged to establish a committee to aid in the selection of pupils who will receive special provisions and/or programs for the gifted and talented.

Since the population of gifted and talented pupils is heterogeneous, the identification process is necessarily complex. Using intellectual assessment (I.Q. testing) alone, as a single criterion, is not sufficient for use in selection for some gifts or talents. Intelligence testing may discriminate, for example, against children who have potential in the visual or performing arts but whose verbal ability is only average, or against children who are culturally different.

To be fair and just, the data sources used for selection should be as reliable and valid as is feasible. Accordingly, additional development and validation of procedures merit consideration.

PROGRAM

In this section the term "program" is used to refer to all aspects of curriculum development, instructional methods, support services and organizational structures or delivery systems.

Conclusion

3. Education of the gifted and talented requires special programs from grades 1 through 12. Gifted and talented children need a "qualitatively differentiated" curriculum which will challenge them, stimulate their thinking, and broaden their abilities and interests. They also need a curriculum suited to their chronological and mental ages. Leadership and coordination of school programs at the local level is also essential.

Recommendations

It is recommended that:

3.1 All school jurisdictions be responsible for providing special programming (curriculum, instruction and support services) commensurate with the specific needs of gifted and talented pupils.

3.2 Alberta Education identify (and develop where necessary) a variety of models of educational programs or provisions and develop guidelines for support services, including parental involvement, to be used by schools in determining appropriate provisions for the needs of gifted and talented pupils.

3.3 All school jurisdictions designate a staff member to be responsible for coordination and communication with regard to the education of gifted and talented pupils.

Commentary

Choice of curriculum is crucial to the success of programs for gifted and talented pupils. Some local jurisdictions therefore need guidance and direction from appropriate sources, including Alberta Education. (Note: Inservice for all persons involved - see Recommendation 7.1 on page 48 - can also contribute to the program's success.)

Gifted and talented pupils need curricula which emphasize the upper levels of the taxonomies in the cognitive and affective domains. Conventional schooling emphasizes linear or convergent thinking and getting the "right" answers whereas gifted and talented pupils need opportunities for lateral or divergent thinking and creative problem solving.

Since the pupils served are especially heterogeneous, programming must be flexible so that adaptation to individual differences is feasible. A variety of models of instruction are appropriate.

The Task Force noted that in many cases gifted and talented pupils are expected to do a "double curriculum"; that is, they must complete regular class assignments and do additional special work as well. The Task Force believes that this approach to programming is not acceptable and that alternative strategies should be considered.

Conclusion

4. There are aspects of the provincial curricula which could be used in or adapted for the education of gifted and talented pupils.

Recommendation

It is recommended that:

4.1 Alberta Education survey curricula to identify aspects which are potentially useful in or adaptable for the education of gifted and talented pupils.

4.2 Alberta Education consider the needs of gifted and talented pupils in the development and revision of all curricula.

Commentary

Alberta Education may well find some suitable curricula for gifted and talented pupils in its present curriculum documents. Accordingly, to

avoid duplication of effort, a thorough review would be in order before new curricula is developed. Adaptation of present curricula might also be useful in some cases.

The Task Force believes that flexibility is important in all aspects of curriculum development and implementation for gifted and talented pupils. Although present curricula may be suitable in some cases, school jurisdictions need freedom to adapt curriculum to suit local conditions.

Conclusion

5. Since a variety of organizational structures are possible, schools face the challenge of determining the most appropriate means for serving their clientele. Local school jurisdictions are responsible for developing administrative policies and procedures that are consistent with provincial legislation and guidelines.

Recommendations

It is recommended that:

5.1 Alberta Education develop guidelines for a variety of delivery systems for the education of gifted and talented pupils.

5.2 Local school jurisdictions a) recognize that a variety of delivery systems can be used in the education of gifted and talented pupils, and b) be responsible for developing related policies and procedures.

Commentary

Many delivery systems (including acceleration, special grouping, enrichment, special schools and other arrangements) are viable, depending on local needs, resources and geographic/demographic conditions. In many instances one or more or a combination of several delivery systems can be used effectively (see pp. 28 - 31). Some pupils' needs are best met

through enrichment in regular classes, whereas in other cases special schools for gifted and talented pupils are appropriate.

Since delivery systems must be adapted and modified to suit local conditions, flexibility is of primary concern. Another concern, in the case of enrichment or special grouping, is time allotted to programs. Several pupils enrolled in special classes for the gifted and talented provided written submissions to the Task Force indicating that they enjoyed the special classes very much but that activities took place for only one or two hours per week, which was not enough time.

Conclusion

6. The social, emotional and vocational needs of gifted and talented pupils warrant attention.

Recommendations

It is recommended that:

6.1 Local school jurisdictions provide counselling and psychological support services to address the special needs of gifted and talented pupils.

6.2 Present university training programs for psychologists and counsellors be augmented to include study of the needs of gifted and talented children.

Commentary

Gifted and talented children may not be as socially and emotionally mature as they are intellectually advanced. These children sometimes suffer because they are different, and can be extra sensitive and highly susceptible to adult and peer opinion. Unfortunately, teachers, pupils, family members and the general public may have difficulty understanding

and accepting the gifted. The usual response has been to counsel the gifted child to cope with his or her situation. This Task Force suggests that those who come into contact with the gifted child might also be encouraged to be more tolerant and to value the contributions the gifted child can make.

INSERVICE EDUCATION AND TRAINING OF TEACHERS

Conclusion

7. Teachers, administrators, counsellors and all persons involved in educating gifted and talented pupils need to develop a greater awareness of these pupils' special needs and translate this knowledge into effective teaching practices. Provision of effective inservice education requires awareness of these needs at both local and provincial levels.

Recommendations

It is recommended that:

7.1 Alberta Education assume a leadership role in communicating to appropriate agencies the importance of inservice education for teachers and others involved with the education of gifted and talented pupils.

7.2 Responsibility for the inservice education of teachers be shared by appropriate agencies, including school jurisdictions, universities, Alberta Education, the Alberta Teachers' Association, the Alberta School Trustees' Association and the Conference of Alberta School Superintendents.

Commentary

Teachers and other educators frequently lack knowledge and skills in the area of the education of the gifted and talented. Inservice education can facilitate the development, implementation and evaluation of all new programs.

Conclusion

8. Parents require orientation and assistance in recognizing, understanding and fulfilling the needs of their gifted and talented children.

Recommendation

It is recommended that:

8. Alberta Education identify and/or prepare resource materials which school jurisdictions and other agencies can use in providing consultation and education for parents.

Commentary

Submissions to the Task Force indicated that individual parents, parent support groups and family support agencies would find such resource materials useful.

Conclusion

9. Alberta post-secondary institutions lack comprehensive teacher training programs which focus specifically on the education of gifted and talented pupils.

Recommendations

It is recommended that:

9.1 Alberta university faculties of education prescribe that all prospective teachers take one full survey course equivalent on understanding the needs of various types of exceptional pupils, including the gifted and talented.

9.2 Alberta universities provide specialized training at the graduate Diploma or Masters level for teachers of gifted and talented pupils.

9.3 Alberta Advanced Education provide the additional funds necessary to implement the foregoing courses and programs (see Recommendations 9.1 and 9.2).

Commentary

Sometimes gifted and talented children are overlooked because classroom teachers are not sufficiently skilled in recognizing their characteristics. The Task Force therefore concludes that all teachers need some training in recognizing and working with gifted and talented pupils.

Additionally, teachers who are assigned to special programs for gifted and talented pupils must have comprehensive knowledge and understanding of the pupils' needs, along with the relevant skills. Presently, comprehensive and systematic university training in this field is not available in Western Canada.

OTHER PROGRAM CONSIDERATIONS

Conclusion

10. The school, family and community have a joint responsibility to help gifted and talented children a) pursue individual interests, b) grow socially and emotionally and c) develop creative abilities,

divergent thinking skills, and visual and performing arts skills. There is a need to consider what roles community agencies, professional and interest groups, local school jurisdictions, post-secondary institutions and provincial government departments play in their shared responsibility for the education of gifted and talented pupils. An area in which responsibility particularly needs to be shared is education in the visual and performing arts, since schools frequently lack the necessary resources to provide in-depth experiences in the arts. Agencies outside the school could assist greatly with this type of instruction.

Recommendations

It is recommended that:

10.1 Alberta Education prepare guidelines to be used by school jurisdictions in coordinating the involvement of non-school persons and agencies in the education of gifted and talented pupils.

10.2 School jurisdictions be flexible in allowing pupils access to appropriate learning experiences outside the school without penalty.

Commentary

The academic emphasis which is typical in most schools can be detrimental for pupils who are gifted and talented in the visual or performing arts and in other non-academic areas. Recognizing that schools are not always able to provide in-depth programs in the arts, the Task Force suggests that schools could do more to help artistically gifted pupils gain access to artistic experience outside the school. Experiences outside the school are also relevant for pupils who have skills and talents in other areas.

RESEARCH AND EVALUATION

Conclusion

11. Continuing research is needed to determine and evaluate the best programs and identification procedures for gifted and talented children.

Recommendation

It is recommended that:

11. Alberta Education encourage and support research and evaluation in all areas related to the education of gifted and talented pupils.

Commentary

Much remains to be learned about the best ways of educating gifted and talented pupils. Research into all aspects of this field would be extremely useful. For example, since the application of computer technology could have particular relevance to the education of the gifted and talented, research in this area would probably be fruitful.

PROVINCIAL INITIATIVES

Conclusion

12. Provincial legislation is required to clearly establish that all Alberta school jurisdictions have a legal responsibility to provide appropriate educational programs and/or provisions for gifted and talented pupils.

Recommendations

It is recommended that:

12.1 Alberta Education enact legislation which prescribes that local school jurisdictions offer appropriate educational programs and/or provisions for gifted and talented pupils.

12.2 Alberta Education include mandatory legislation regarding the education of gifted and talented pupils on the agenda for its upcoming revision of The School Act.

Commentary

The laws of Canada (and of Alberta) uphold and protect individuals' rights, but fair and just treatment of all children might be better ensured through more specific legislation. In its report entitled Child at Risk, the Standing Senate Committee on Health, Welfare and Science recommended that "... those Provincial Governments that have not already done so introduce legislation making school boards legally responsible for providing all handicapped, learning disabled and highly intelligent children in the public school system with access to special education" (Government of Canada, 1980, p.58).

Aside from the human rights aspect, the recommended legislation would be congruent with the general educational goal of maximizing the development of all children. The gifted and talented are potentially able to contribute a great deal to society, but if they receive no encouragement or support, many of their contributions could be lost.

Conclusion

13. School jurisdictions lack the financial resources necessary to support appropriate education of gifted and talented pupils on a secure and continuing basis.

Recommendations

It is recommend that:

13.1 Alberta Education provide grants to local school jurisdictions, specifically for the purpose of initiating and maintaining programs and support services for the education of gifted and talented pupils.

13.2 Specific provincial grants for programs and support services for the education of gifted and talented pupils be designed to provide approximately 85% of allowable costs.

13.3 The provincial government and the private sector offer specific incentives, grants, awards and scholarships to pupils to encourage the pursuit of excellence.

Commentary

Since programs and support services for gifted and talented pupils are a new venture for many school systems, financial incentives are required to facilitate initiation. Current school finance arrangements have no ear-marked grants for the provision of programs and services for gifted and talented pupils; yet such grants exist for the education of other groups of children with special needs, such as the handicapped.

The Task Force suggests a provincial share of 85% of allowable costs on the basis that some other provincial grants aim at providing approximately that much of the cost (for example, transportation grants).

Conclusion

14. Alberta Education needs to establish clearly visible leadership in the area of education for gifted and talented pupils. At present, no particular individual or section of Alberta Education has responsibility in this area.

Recommendations

It is recommended that:

14.1 Alberta Education establish the positions of a) a provincial coordinator and b) a consultant in each Regional Office of Education to provide leadership, consultation and program evaluation with regard to the education of gifted and talented pupils.

14.2 Alberta Education provide inservice education on the needs of gifted and talented pupils to all consultants in the Regional Offices of Education, in order to enhance the abilities of these consultants to provide services in this area.

14.3 Alberta Education establish a central clearinghouse service[8] to provide an information service to all Alberta school jurisdictions regarding curricular resources and exemplary programs for the education of gifted and talented pupils.

14.4 Alberta Education establish regional resource centres[9] which are integrated with a provincial clearinghouse service (see Recommendation 14.3).

Commentary

Since special programs for the gifted and talented are relatively new, many school jurisdictions will need help with implementation and evaluation. Also, since programs for gifted and talented children often

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8. The "central clearinghouse" refers to a central agency which provides coordinating and facilitating services. Often the service involves simply a list of all available resources which is kept up to date and distributed to regional resource centres and school jurisdictions on a regular basis.

9. "Regional resource centres" store at least one copy of each available item so that potential users can examine it and determine whether or not it is suitable for their needs. More copies of items judged to be appropriate can then be ordered.

involve individualized curriculum and adaptation to local conditions, the availability of a wide range of materials and resources is important. When materials and resources are accessible locally or regionally, teachers, parents and agencies are more likely to make use of them.

Members of the Task Force on Gifted and Talented Pupils sincerely hope that the interests of gifted and talented children in Alberta will be better served as a result of their efforts in preparing this report.

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APPENDIX A

NEWSPAPER ADVERTISEMENT INVITING WRITTEN SUBMISSIONS

APPENDIX A

Newspaper Advertisement Inviting Written Submissions

Between the dates of August 28 and September 1, 1982, this advertisement appeared in Alberta's daily newspapers (Calgary Herald, Edmonton Journal, Edmonton Sun, Fort MacMurray Today, Grande Prairie Herald Tribune, Lethbridge Herald, Lloydminster Times, Medicine Hat News, and Red Deer Advocate.)

Invitation to the Public

What do you think about the education of gifted and talented children?

Who are gifted?

How do we find them?

What are their educational needs?

THE MANDATE OF ALBERTA EDUCATION'S TASK FORCE ON GIFTED AND TALENTED CHILDREN, IS TO:

- define gifted and talented students, (Grades 1 to 12)
- examine, evaluate and compile information on programs and services for gifted and talented students,
- determine appropriate ways to serve gifted and talented students in Alberta.

You are invited to make written submissions on the education of Alberta's gifted and talented children. Your comments might describe successful program models and/or identify major interests and concerns regarding the education of gifted and talented students.

Responses are to be submitted by September 30, 1982 to:

Task Force on Gifted and
Talented Students
Alberta Education
Special Educational Services
5th Floor West Devonian
Building
11160 Jasper Avenue,
Edmonton, Alberta
T5K 0L2
Telephone: (403) 427-2939

Alberta
EDUCATION

APPENDIX B

LETTER TO PERSONS OR GROUPS WHO SENT WRITTEN SUBMISSIONS TO THE TASK FORCE

APPENDIX B

This letter was sent in October 1982 to individuals, groups and agencies who provided written submissions to the Task Force.

Dear _____:

This letter is to acknowledge again receipt of your written submission to the Task Force on Gifted and Talented Pupils and to offer you the opportunity to consider presenting your views in person to the Task Force if desired. This opportunity to address the Task Force is extended to all individuals, groups, and agencies that have provided a written submission.

We do not expect that everyone will want to present his/her views orally. If, however, you plan to address the Task Force please telephone Mrs. Sabita Jaipaul, at 427-2939 during the day (8:15 a.m. - 4:30 p.m.) before Friday, October 29th.

The Task Force will meet with presenters on Tuesday and Wednesday, November 16th and 17th in Calgary, and on Thursday and Friday, November 25th and 26th in Edmonton.

Space constraints will not permit us to accommodate more than two presenters from your group.

Mrs. Jaipaul will provide you with specific information on the time, date, and location for your meeting with the Task Force in her telephone conversation with you.

.../2

Presenters will be allowed 15 minutes for their presentation. Presenters will also be expected to provide the Task Force with one copy of a one page summary of major points to be presented orally. Presenters are asked to focus their comments on major issues of concern to them in the education of the gifted and talented.

It is accepted by the Task Force that definite needs in the education of the gifted and talented do exist so that you may not wish to address the issue of need. The Task Force especially welcomes information in the areas of identification, evaluation, and the delivery of programs for the gifted.

Thank you for sending in a written submission and expressing your interest in this vital area of education.

Yours sincerely,

Terrance R. Mott
Executive Secretary
Task Force on Gifted and
Talented Pupils